Smithsonian

{ DECEMBER 2006 }

Novelist Paul Theroux on living with geese, "gushing anthropomorphism" and E. B. White's "deficiency of observation"

Saving Timbuktu's Lost Treasures

Rembrandt: the Master at 400

Antarctica's Icy Hot Volcano

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Later in life, in closely observed paintings such as his warts-and-all *Self-Portrait* of 1659, he unflinchingly recorded the marks of time and experience.

—**"REMBRANDT AT 400,"** PAGE 72

THIS PAGE: Rembrandt painted some 70 self-portraits. The work above was done when he was 53. Andrew W. Mellon Collection, National Gallery of Art, Washington, D.C.

COVER: So many ideas people have about geese are wrong, says author Paul Theroux (a white China goose, one of the most popular domestic breeds). Composite photograph by Bob Elsdale / Eureka / Alamy.

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As they head down the crater's rim, Mount Erebus spatters lava over the area they've just explored. The largest "lava bombs" are about ten feet wide—great blobs that collapse like failed soufflés when they land.

—"ANTARCTICA ERUPTS!," PAGE 58

THIS PAGE: Ice chimneys on Mount Erebus (volcanologist Julie Calkins prepares to descend into one of the large chambers) can reach 60 feet.
Photograph by George Steinmetz.

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FROM THE EDITOR

Soft Power

Some promising endeavors on Pacific islands

BY CAREY WINFREY

PAUL THEROUX, author of the novels *Chicago Loop* and *The Mosquito Coast* and numerous travel books, including *The Old Patagonian Express* and *The Great Railway Bazaar*, began keeping geese on his six-acre Hawaiian spread because he was sick of cutting the grass. Somebody told him that the birds would be the answer. "Three of them kept it short, and I seldom cut grass anymore," he says. "Also, I got to see aspects of goose behavior that fascinated me."

In his cover essay, "Living with Geese" (p. 38), Theroux, never one to pull punches, takes on the rampant practice of anthropomorphism—ascribing human qualities to animals—as well as fellow gozzard E. B. White, the venerated author of *Charlotte's Web* and, more to the point, a much-praised essay on geese. "I was very surprised," says Theroux, "to see the inaccuracies in the famous E. B. White essay—notions that needed to be corrected." Yet even Theroux slips at times, describing, for example, "the great joyous cry of the guarding gander." Does that make him guilty of the very thing he decries? "Obviously, in describing geese," he says, "one is using the same lexicon that one would use for humans, but it is possible to go overboard. What bothers me most about passionate anthropomorphists is that they are often misanthropes."

HAVING REPORTED ON militant Islam throughout Southeast Asia, Eliza Griswold was interested in covering the U.S. military counterterrorism program in the southern Philippines ("Waging Peace in the Philippines," p. 82), where terrorists have operated since at least the 1990s; two of the Bali bombers are believed to be still hiding there. She was surprised to find little hostility toward the United States. "This is largely because the Philippines is Christian and also because of the long-standing American involvement there," Griswold says. She was also surprised by the relative success of the U.S. military's unusual counterterrorism efforts in parts of the 7,000-island nation: "What's going on in the Philippines is important and interesting because now we're seeing—in other places too—a move toward 'soft power,' toward a nonmilitary response to terror, and this is the oldest model of that."

Griswold: Surprised by success.

Smithsonian magazine 4TH ANNUAL PHOTO CONTEST

ENTRIES FOR THIS YEAR'S photo contest are due by 2 p.m. (Eastern time) January 4, 2007, at Smithsonian.com.

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VESIcare has not been studied in children.

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Who should NOT take VESIcare®?
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- have delayed or slow emptying of your stomach (also called "gastric retention"),
- have an eye problem called "uncontrolled narrow-angle glaucoma",
- are allergic to VESIcare or any of its ingredients. See the end of this leaflet for a complete list of ingredients.

What should I tell my doctor before starting VESIcare®?
Before starting VESIcare tell your doctor or healthcare professional about all of your medical conditions including if you:
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- have trouble emptying your bladder or you have a weak urine stream,
- have an eye problem called narrow-angle glaucoma,
- have liver problems,
- have kidney problems,
- are pregnant or trying to become pregnant (It is not known if VESIcare can harm your unborn baby.),
- are breastfeeding (It is not known if VESIcare passes into breast milk and if it can harm your baby. You should decide whether to breastfeed or take VESIcare, but not both.).

Before starting on VESIcare, tell your doctor about all the medicines you take including prescription and nonprescription medicines, vitamins, and herbal supplements. While taking VESIcare, tell your doctor or healthcare professional about all changes in the medicines you are taking including prescription and nonprescription medicines, vitamins and herbal supplements. VESIcare and other medicines may affect each other.

How should I take VESIcare®?
Take VESIcare exactly as prescribed. Your doctor will prescribe the dose that is right for you. Your doctor may prescribe the lowest dose if you have certain medical conditions such as liver or kidney problems.
- You should take one VESIcare tablet once a day.
- You should take VESIcare with liquid and swallow the tablet whole.
- You can take VESIcare with or without food.
- If you miss a dose of VESIcare, begin taking VESIcare again the next day. Do not take 2 doses of VESIcare in the same day.
- If you take too much VESIcare or overdose, call your local Poison Control Center or emergency room right away.

What are the possible side effects with VESIcare®?
The most common side effects with VESIcare are:
- blurred vision. Use caution while driving or doing dangerous activities until you know how VESIcare affects you.
- dry mouth.
- constipation. Call your doctor if you get severe stomach area (abdominal) pain or become constipated for 3 or more days.
- heat prostration. Heat prostration (due to decreased sweating) can occur when drugs such as VESIcare are used in a hot environment.

Tell your doctor if you have any side effects that bother you or that do not go away.
These are not all the side effects with VESIcare. For more information, ask your doctor, healthcare professional or pharmacist.

How should I store VESIcare®?
- Keep VESIcare and all other medications out of the reach of children.
- Store VESIcare at room temperature, 50° to 86°F (15° to 30° C). Keep the bottle closed.
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This leaflet summarizes the most important information about VESIcare. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about VESIcare that is written for health professionals. You can also call (866) 972-4636 toll free, or visit www.VESICARE.com.

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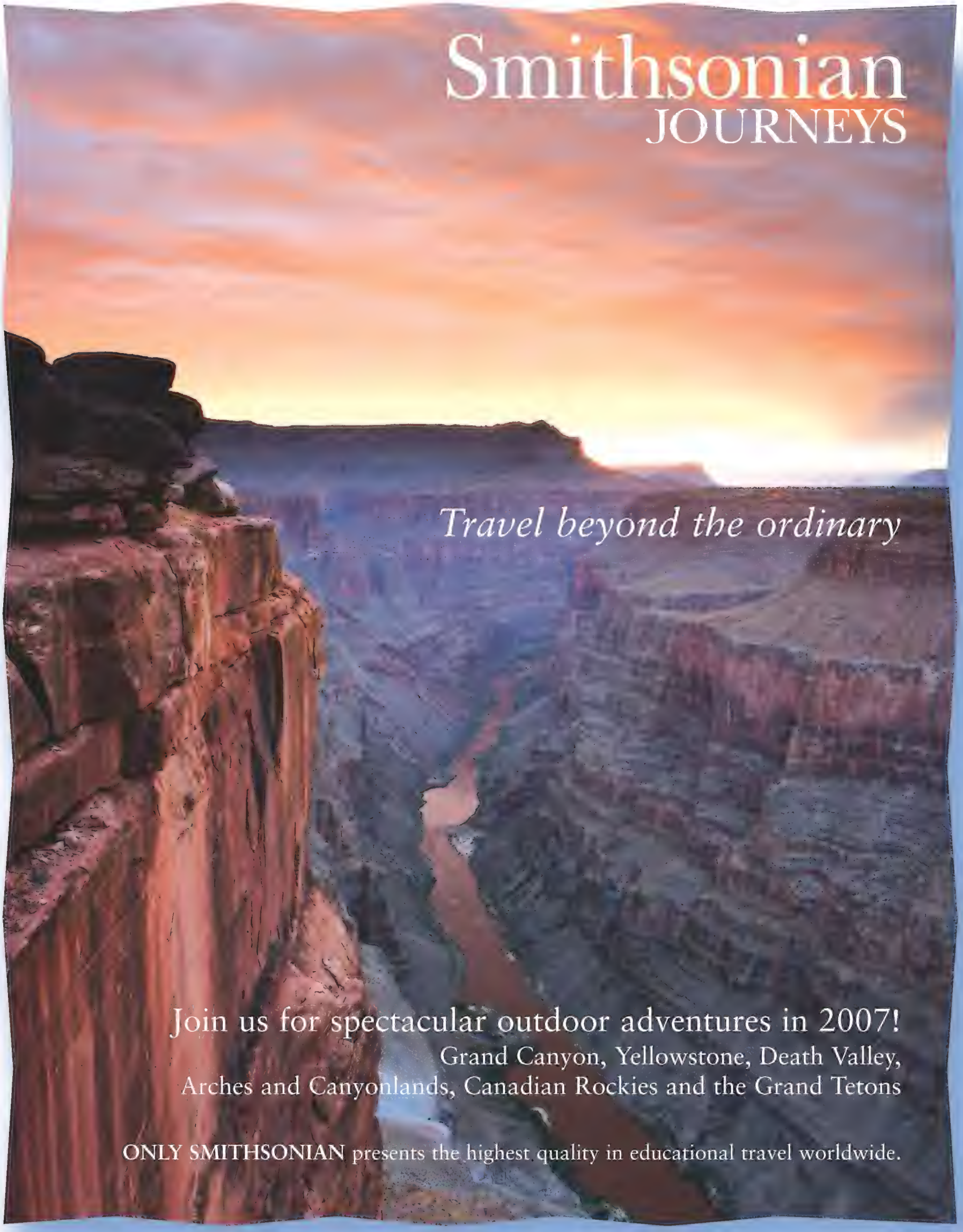
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LETTERS READERS RESPOND TO THE **OCTOBER** ISSUE

Geneticist Svante Paabo ("Neanderthal Man") says that discoveries of similarities between our DNA and that of lowly creatures such as worms and flies strike some people as a "blow to the idea of human uniqueness." I doubt that learning we share some DNA with worms will bother us all that much. When worms and flies can sequence DNA, then I'll worry.

PAULA DEANE TRAYNHAM, FORT WORTH, TEXAS

GROWING PAINS

AUTHOR JOEL GARREAU tells us ("300 Million and Counting") that the world faces "catastrophic population shrinkage" because "nearly half the world's population lives in countries where the native-born are not reproducing fast enough to replace themselves." But this is mind-bogglingly misleading. The world's population is still growing quite rapidly. Most of that growth is occurring in the poorest countries in the world—where governments are already struggling to meet the most basic needs of their citizens. And although the rate of growth has slowed, we're still adding 76 million people to the planet every year. The impacts remain dramatic, contributing to global warming and political instability. Some 850 million people are chronically undernourished, and that number is growing by 4 million every year in developing countries; by 2025, nearly 3 billion people will live in countries facing chronic water scarcity.

At the same time, Garreau doesn't really address the problems that the United States faces because of its growing population: depletion of groundwater, destruction of ecologically sensitive areas, adverse health effects of air pollution and loss of prime farmland. Most Americans recognize that growth isn't improving their quality of life and are demanding that local officials deal with the problem. But the issue requires national attention.

BRIAN DIXON
POPULATION CONNECTION
WASHINGTON, D.C.

Joel Garreau replies:
Yes, the total global population has not finished increasing. My article stated this. But that so many countries have population growth rates below replacement level is an equally important part of the equation, though not as well publicized or understood. Why exploring that fact would inconvenience an organization that was called, until 2002, Zero Population Growth is puzzling to me.

LIFE ON EARTH

IT SEEMS IRONIC we spend thousands of dollars and hours looking for planets that could potentially support life ("The Planet Hunters") while treating our own life-supporting, beautiful and fragile planet with such disdain. What if we were as diligent in protecting the diverse forms of life on Earth as we are in looking for life on other planets?

JOHN BAER
ARROYO GRANDE, CALIFORNIA

CHANGE HAPPENS

ULRICH BOSER'S piece ("Say What?"), about American dialects, quotes a linguist saying changing language patterns are "not really like biological evolution," in that that they don't get "better" as they change. Say what! Biologists don't believe that evolution is toward something "better." This is a dangerous misconception. Language and evolution both drift in arbitrary directions, then attrition or a crisis eliminates those variations that are weaker under local circumstances. Are blind cave lizards better than their sighted ancestors? Is "y'all" better than "youse"? Value judgments can be made, but the process is not toward "better" in either field.

DAN KLARMANN
ST. LOUIS, MISSOURI

HOT ROCKS DASH MOON SKEPTICS

AS A FORMER student intern at NASA's Johnson Space Center now serving time for the heist of Apollo moon rocks, I share the frustration expressed by Melody Von Smith in "Moonstruck." Arguing logic with those who hold ignorance as a badge of honor rarely does any good. When people say to me that the moon landings were faked, I simply ask them to explain why I am here.

THAD ROBERTS
FEDERAL PRISON CAMP
FLORENCE, COLORADO

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Mount Washington, New Hampshire: 5:30 a.m. The temperature is -9°F, wind chill 50 below, winds gusting at 80 mph. And Rick Giard is heading out to work. He's an intern at the Mount Washington Observatory, where meteorologists study what's been called the "world's worst weather."

Among Rick's many chores is shoveling huge snowdrifts and painstakingly chipping solid ice off sensitive weather instruments. But don't feel too bad for Rick. He loves his job.

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WILD THINGS

LIFE AS WE KNOW IT

NEW SPIN

Mammal species rise and fall with a baffling regularity—most survive about 2.5 million years and then go extinct. Now a study led by Utrecht University in the Netherlands offers an explanation: wobbles in Earth's orbit. The scientists analyzed the fossil record of rodents from Spain over 22 million years. (At left, a drawing of an extinct squirrel.) Extinctions tended to coincide with either a shift in Earth's tilt, which occurs every 1 million years, or an increased roundness of its orbit, which occurs every 2.5 million years; both cool the Northern Hemisphere. We are entering a round orbit phase, but extinctions implied by this study may not begin for tens of thousands of years.

JEEPERS CREEPERS

While studying zebra tarantulas, researchers in Germany saw something unexpected: footprints. They were silky secretions left by tiny structures in the tarantula's feet as it climbed up a glass plate. Previously, spiders were thought to produce silk only in special abdominal organs. Why the sticky feet? The Max Planck Institute scientists say these hefty spiders—weighing up to seven grams—need added traction on slippery leaves in their rain forest habitat.

WHERE'D YOU GET THAT SMILE?

Ever notice how a little girl frowns just like her mother? Common sense suggests that her expression is mostly learned, the product of years of mimicking her parents. But a new study from the University of Haifa in Israel shows other forces at work. Scientists filmed interviews with 21 congenitally blind people and found that their signature facial expressions were strikingly similar to those of close relatives. Thus frowns, smiles and scowls may be part of one's genetic inheritance.

Observed

NAME: *Cuscuta pentagona*, a parasitic plant better known as dodder
RECENTLY SEEN ON: The Agriculture Department's top noxious weeds list
NOW KNOWN AS: The plant kingdom's first known sniffer dog
ITS NOSE KNOWS? Yes: *C. pentagona* can actually detect airborne chemicals emitted by its preferred host, a tomato plant, says a new study from Pennsylvania State University. *C. pentagona* seedlings may seem pathetic—they have no roots and little means of performing photosynthesis—but "sniffing" steers them toward hosts quickly, before their own limited energy stores run out.
THAT'S INSIDIOUS Well, yes and no. The discovery may speed up the development of ways to control this noxious pest, which can depress tomato yields 90 percent.

FREE AS A BIRD

In the Colombian Andes, ornithologist Thomas Donegan, of the conservation group Fundación ProAves, discovered a new subspecies (above) of the yellow-breasted brushfinch. The find adds a nuance to avian taxonomy, but the key is what happened next: he let the bird go. Biologists have traditionally established new types of animals with a preserved (dead) specimen. Authorities ruled in 1999 that scientists may use evidence from living specimens, and Donegan is only the third one to do so. He photographed the bird and sampled its DNA, the ultimate ID.

Visit Smithsonian.com for images of facial expressions.

CLOCKWISE FROM TOP: MAURICIO ANTÓN; DAVID P. HALL / CORBIS; BLANCA HUERTAS / ASSOCIATED PRESS; JUSTIN RUNYON / COURTESY OF DE MORAES AND MESCHER LABS; RANDY MAY

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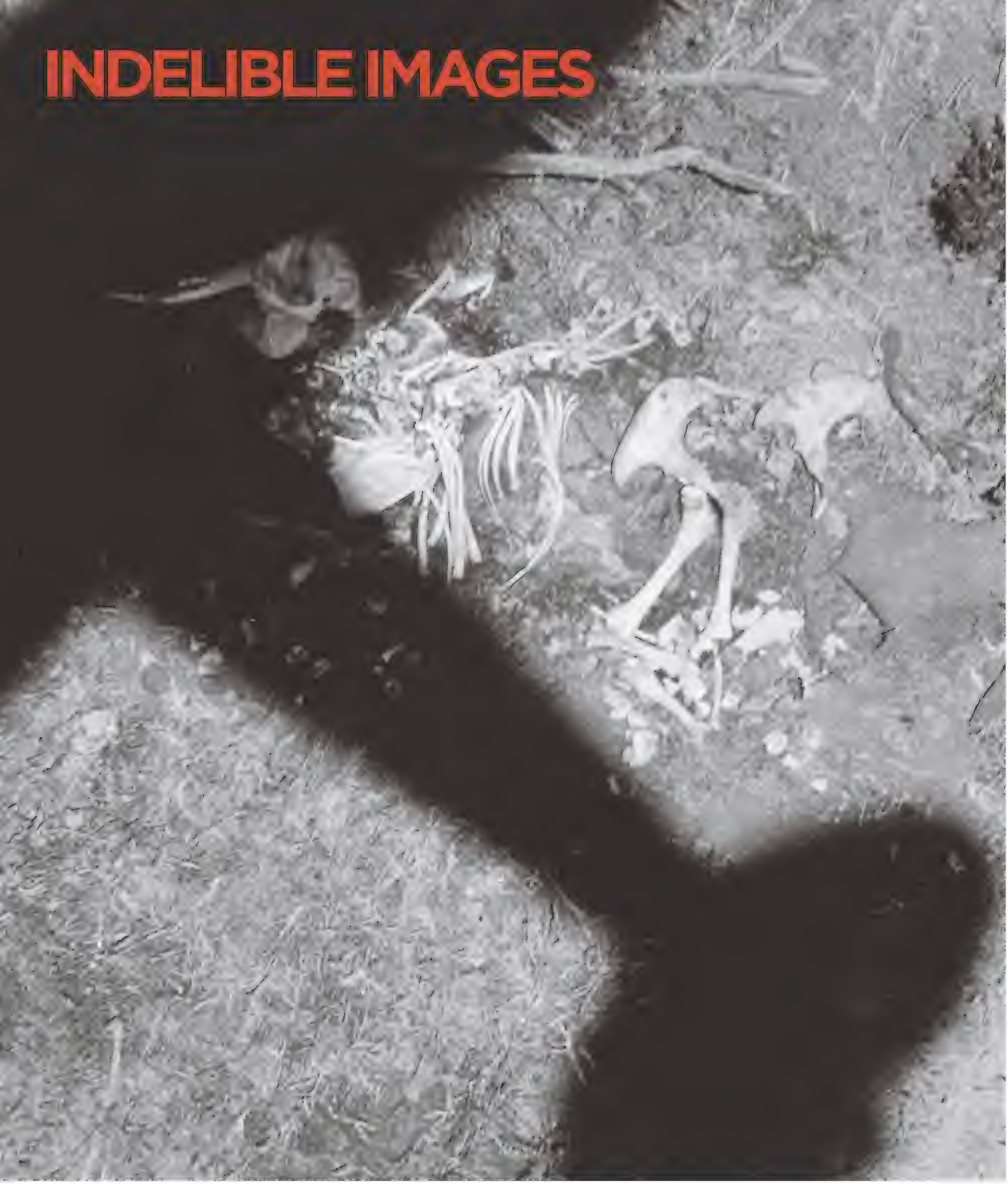


Beard's Eye View

When elephants began dying, Peter Beard suspected that poachers were not entirely to blame **BY OWEN EDWARDS**

FOR A PHOTOJOURNALIST, being in the right place at the right time (usually a bad time) is often a matter of luck, earned by risks taken and obstacles overcome. Peter Beard made that kind of luck.

Beard took this haunting image in 1971 from a single-engine Cessna flying over Kenya's Tsavo National Park as part of his effort to document an environmental disaster—a forest stripped of its vegetation. The juxtaposition of the plane's shadow—the metaphorical intrusion of predatory modernity—with the remains of one of Africa's most magnificent creatures suggests both a Goya canvas and the harsh reality of war photography. The picture is included in *Peter Beard*, published last month.

Beard was born in New York City in 1938, an heir to both the Hill railroad and Lorillard tobacco fortunes. After graduating from Yale, where he studied old masters drawings, he began spending much of his time in Kenya. Beard's muse was Karen Blixen, author (under the pen name Isak Dinesen) of *Out of Africa* and other works that portray the continent as an untamed Eden. "When you go to art school, you become an escapist," Beard says today. "I wanted to get away from the unnatural and escape to the natural. To go back into authenticity."

In the early 1960s, Kenyan park officials were saying that the biggest threat to the country's great elephant herds was ivory poaching. But Beard believed that the greater problem was density—that the migratory and ever-growing herds, confined to parks established to protect them, were eating their way into oblivion. Yes, there was poaching, he acknowledged, but the carcass in this picture (and in many others he took) was sprawled, tusks still in place, in a denuded landscape.

Beard—tutored by Richard M. Laws, a zoologist who had begun a study of Tsavo's elephants in 1966—believed that the herds had to be scientifically culled by professional hunters. Neither game wardens nor wildlife advocates welcomed that idea; among other concerns, they believed that news coverage of thousands of elephants being shot would doom any conservation efforts. In the rancorous debate that followed, Laws resigned.

Beard's persistence in photographing starved elephants led to his being banned from Tsavo and other preserves. "I went anyway," he says. "I knew all the ways in." He also began hiring pilots to fly him over the vast parks. Beard saw in the elephant's plight some human parallels. "We're just like the elephants," he says. "They adapt to the damage they've caused. They'll walk 20 miles on a desert they've created to get to the next tree." He published many of his elephant pictures in his 1965 book, *The End of the Game*. As development and farming expanded, more elephants were forced off their natural habitat and into parks. By 1973, Laws' successor in the elephant study, Philip Glover, was calling vast areas of Tsavo "elephant slums."

Socially, humans "are just like the elephants," says Beard (above, satirizing his compulsive journal-keeping in a 1965 self-portrait). "They adapt to the damage they've caused."

In the end, Beard may have been right about the problem and wrong about the solution. Gay Bradshaw, a psychologist in the environmental sciences programs at Oregon State University and Pacifica Graduate Institute in California who is writing a book to be called *Elephant Breakdown*, contends that "culling is neither ethically nor scientifically viable." She and others have attributed a recent rise in aberrant elephant behavior—including attacks on humans and rhinos—to the disruption of herd dynamics that comes with habitat destruction, culling and poaching. The only way to save elephants, Bradshaw says, is to expand their habitat and find a way for humans to coexist with them and other wild animals. "The problem that won't go away is human population and its consumptive demands," she says. "In Africa and India right now, there just isn't any room for elephants."

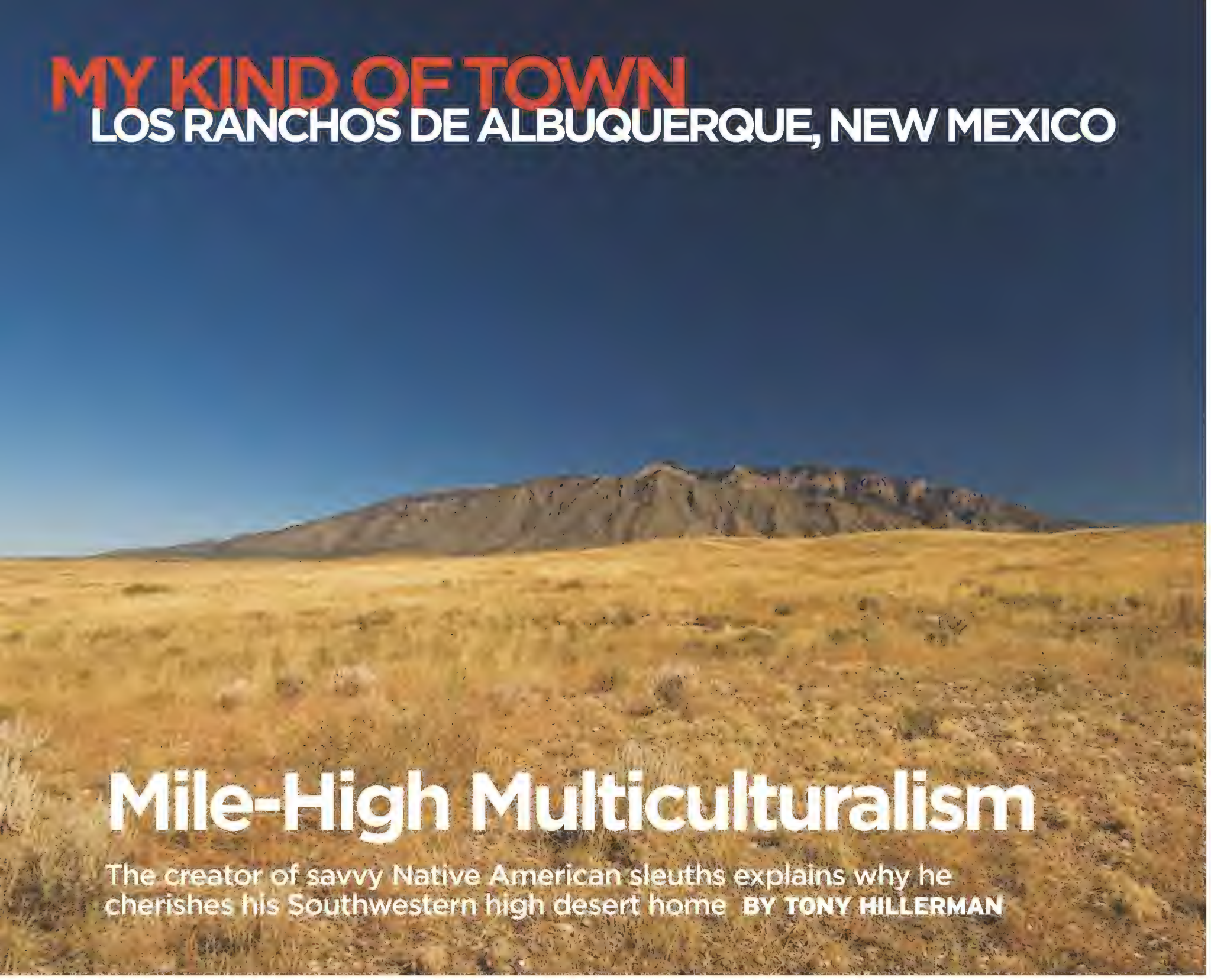
Beard still travels to a 45-acre spread he owns outside Nairobi, and he sees short-term changes in Tsavo after periodic droughts and die-offs. "The vegetation in the park is coming back slowly," he says. But he notes: "In the years since I first went to Kenya, the human population has gone from about 6 million to more than 35 million."

Today, his pictures of the African wildlife crisis function as a kind of motivation for what may be his true art—the daybooks he has compiled over the years, using photographs, drawings and newspaper clippings, all held together by exhaustive notations. When pressed to define his work, he uses the Swahili word *fitina*, variously defined as intrigue, mischief and dissension. "It's a combination of gossip, rumor and voodoo," he says. "I love the idea of a compost heap, fermenting and changing, so when I look back in the diaries years later they're different from what I saw at the time." He doesn't mention any of the many Swahili words for luck, but it is there, earned and owned.

OWEN EDWARDS, *who writes often for* SMITHSONIAN, *is executive editor of* Edutopia, *a magazine about education.*

MY KIND OF TOWN

LOS RANCHOS DE ALBUQUERQUE, NEW MEXICO



Mile-High Multiculturalism

The creator of savvy Native American sleuths explains why he cherishes his Southwestern high desert home **BY TONY HILLERMAN**

WHY IS LOS RANCHOS DE ALBUQUERQUE my kind of town? First, our mile-high, big-sky, cool-night, dry climate. Second, mountains in all directions, reminding you of aspens, pines and silent places. Next, there's the Rio Grande right behind our neighborhood, its shady bosque, or grove, providing habitat for coyotes, porcupines, squirrels, and parking spaces for the assorted geese, duck and crane flocks on their seasonal migrations.

Such assets are common in the Mountain West. Nor can we claim exclusive title to the bosque, since it lines the river from its origin in the Colorado Rockies to its mouth at the Gulf of Mexico. It is the longest strip of unbroken woodland in North America, and probably the narrowest.

"I treasure the empty, silent, untouched mesas and plains," says Tony Hillerman, an adopted son of the Southwest.

The network of irrigation ditches, or acequias, fed by the Rio Grande allows us to believe we are still a farming village. Water still flows to our hayfields, orchards, vineyards and gardens. Yet we also enjoy urban advantages offered by the City of Albuquerque, which has engulfed us. I am one of those country boys who left the farm but couldn't forget it. For me, living in a farm village with city pleasures at hand is a joy.

While we declare our independence—and have our own city hall, firetrucks, mayor and council, and post reduced speed limits on city streets that pass through our village—mapmakers, the U.S. Postal Service and political and commercial agencies all see

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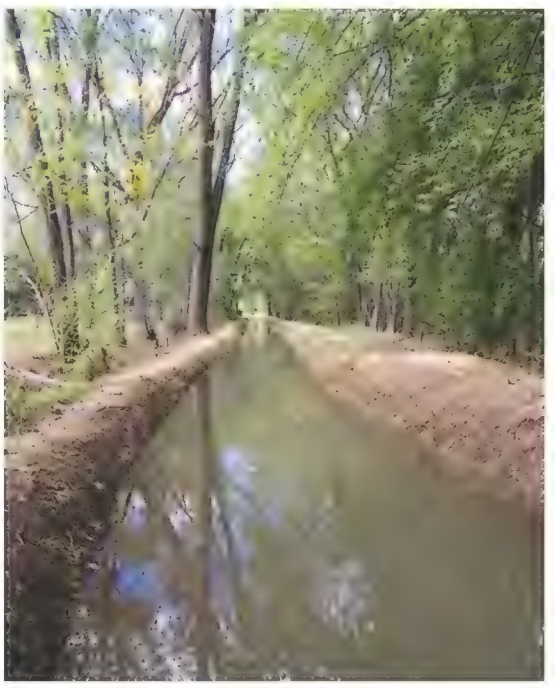
A former mayor described the town: "4 square miles with 5,000 cranky people 5 miles from Albuquerque."

Although Los Ranchos has its own city hall (above), mapmakers and the U.S. Post Office "see us as Albuquerqueans," says the author. A treaty preserved the acequias (below). "Thus, water still flows down our ditches."

us as Albuquerqueans. In the census we are just 5,000 of a half-million citizens who make it New Mexico's major metropolis. Officially urbanites, we drive downtown enjoying the perfume of new-mown alfalfa and the sight of grazing horses. And our nocturnal quiet is punctuated only by occasional yips and honks in the bosque—the honks from the geese whose sleep has been disturbed by the coyotes stalking them.

The map of Los Ranchos on the wall in our little city hall shows a crazily shaped place. It runs along the east bank of the Rio Grande, 7,000 yards long (north to south) and much narrower east to west, varying from as little as a short block in some places to perhaps 3,000 yards at its widest. When I asked a former mayor of Los Ranchos for a brief description, he offered this summary: "Four square miles with 5,000 cranky people five miles from downtown Albuquerque."

Those miles are anything but square, and the "cranky" adjective reflects only those angry enough to call on city hall. However, as the mayor said, the downtown buildings (skyscrapers by Mountain West standards) do loom just to the south, and "Old Town"—the heart of Albuquerque before the railroad came through—is just four miles down Rio



Grande Boulevard from my house.

The survival of our village, and many others, is due to a quirk in history and to geography. History allowed our Pueblo villages, and their water rights, to escape European colonization. And geography made Albuquerque a crossroads. The Rio Grande was the north-south road, and the Tijeras Canyon between the Sandia Mountain ridge and the Manzano Mountains funneled east-west traffic through us.

Many of those villages that formed along the Rio Grande in the 18th and 19th centuries bore the names of pioneer Spanish families. Some grew into towns, such as Bernalillo and Los Lunas. Some faded away, and some survive as Albuquerque "neighborhoods."

History preserved our acequias for us through a treaty. When the Mexican-American War ended, the West was won for us. But Mexico insisted in the Treaty of Guadalupe Hidalgo that our laws respect the rights the Spanish king had given the Pueblo Indians and subsequently granted Spanish settlers, rights that the Mexican Republic had honored after winning its independence from Spain. Thus, people who own land along the ditches still retain rights to their water until they sell those rights. Thus, water still flows down our ditches.

The root cause for our water rights dates back to when the Franciscan friars accompanying the conquistadors disagreed with the army about colonial policies. The friars argued that the Pueblo Indians were "*Gente de razón*," and as reasonable people should be treated properly and converted to Christianity. King Charles agreed, ruling that these Indians were his royal subjects and granting them rights to their lands.

We can also credit the friars with making our villages unusually multilingual, multicultural places. Indian pueblos surround us. Sandia and Zia just to the north, Isleta just down the river, Laguna and Acoma to the west, and Jemez to the north. The British had no such placid policy for accepting Indians into their East Coast colonies. The mortality rate among those tribes is estimated at more than 90 percent, mostly due to the introduction of European diseases.

Thus, while we are officially bilingual only in English and Spanish, we have neighbors who speak Tewa, Keresan, Tiwa, Navajo, Zuni, Hopi and a few other languages of tribes in the Mountain West. The artisans among them come into Albuquerque's popular Old Town plaza and sell their jewelry and pottery. The multimillion-dollar gambling casinos they have built along our highways provide us entertainment while siphoning off our surplus funds.

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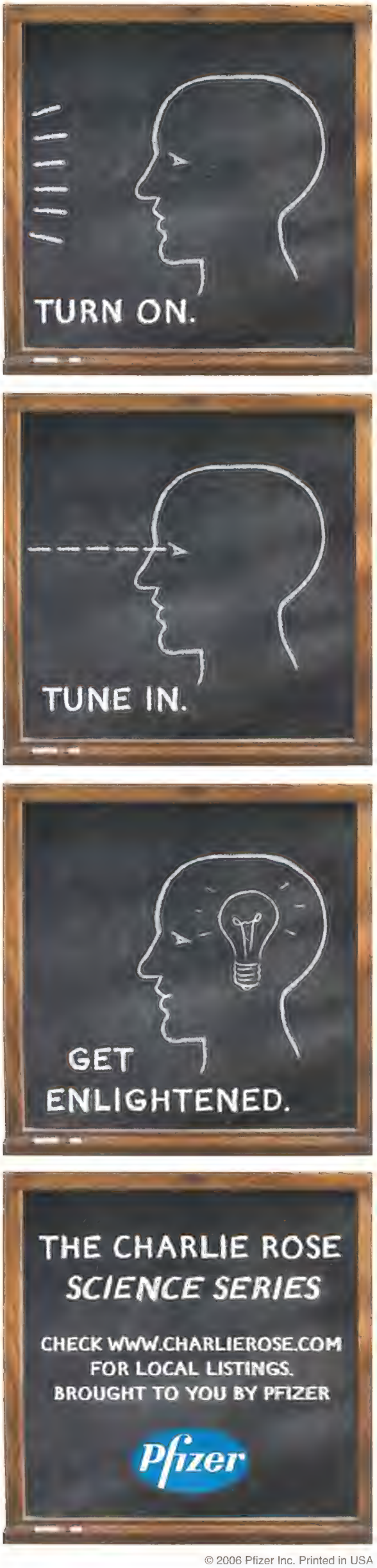

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I credit another merger of history and geography for causing the city that envelops us to develop the way it has. In the 1940s an isolated place was needed to build the atomic bomb. Dr. J. Robert Oppenheimer, in charge of the project, was familiar with the Los Alamos boys' academy atop the Pajarito Plateau in the Jemez Mountains, utterly empty except for the school. The Los Alamos Laboratory was built there; in nearby Albuquerque was Kirtland Air Force Base and Sandia Laboratory. Then the top-secret Manzano Base grew, where we locals believe vast stacks of nuclear weapons are stored deep in the heart of the adjoining mountain. The labs drew spinoff, high-tech support companies. The cold war heated. Albuquerque, which had been a trading center for farmers, ranchers and miners, was flooded with physicists, engineers, computer technicians and other high-skill thinkers of every sort.

This wasn't the first time that progress had a drastic impact on our town. In 1880 the Atchison, Topeka and Santa Fe Railroad decided to roll through our crossroads. Rumor had it that it would bid for land at Albuquerque to build a depot, various maintenance structures and space for housing and business sites. But the availability of cheaper, more stable land led the railroad to move its site about two miles to the east. Albuquerque split. What was originally Albuquerque quickly became "Old Town." The bustling railroad terminus was "New Town." A trolley service opened to join them, but the split never healed. New Town is now Downtown, and Old Town is a lively tourist center, which is another reason I like living here. Visitors to Old Town learn that the Confederates buried their cannon as they retreated down the Rio Grande. They also learn that the Church of San Felipe de Neri on the plaza is the original (with remodeling), founded not long after the colonial governor decided in 1706 this village was important enough to be recognized and named after the tenth duke of Alburquerque. They aren't told that it wasn't until 1956, when we invited the current duke of Alburquerque to come join our 250th anniversary celebration, that we found he had been misspelling our mutual name for 250 years.

The fact that no one has yet suggested we reinsert the missing "r" reflects the relaxed attitude of this place, and that appeals to me. So does the name we've given our minor-league baseball team. They were the Dukes, recognizing our kinship with the royal family. But whoever bought our franchise took the Dukes name with it. We voted on a new name, and the Dukes are now the Isotopes.

Another reason why this is my town is our personal Sandia Mountain—called that by the Spanish because sunsets painted its cliffs watermelon red. It rises to more than 11,000 feet at Albuquerque's city limits, making it convenient for skiers and hang gliders, rock climbers and lovers of long views. The ski run is served by America's longest aerial tram, which means I can leave my home 5,000 feet above sea level and be inhaling cold, thin air two miles high in less than an hour.

From the crest the view is spectacular. Eighty miles west, the sacred Turquoise Mountain rises on the horizon. Northwest, the volcano peak called Cabezon juts into the sky. South, there's Ladron Peak. After dark, the lights of Santa Fe appear at the base of the Sangre de Cristo Mountains, and the lights of Los Alamos on the rim of the Jemez Mountain range. Along the Rio Grande Valley, the lights of more than half the population of New Mexico are visible—including my Los Ranchos porch light.

As beautiful as these lights are, the oceans of darkness that surround them have their own appeal. Those dark spaces represent thousands of square miles of mountains, mesas and plains occupied by absolutely no one. I am one of those who treasures such empty, silent, untouched places. From Los Ranchos, they are easy to reach.

TONY HILLERMAN's *18 mystery novels featuring Jim Chee and Joe Leaphorn include, most recently,* The Shape Shifter *(2006) and* Skeleton Man *(2004).*

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INTERVIEW

MARGARET LOWMAN

ECOLOGIST, SARASOTA, FLORIDA

CARLTON WARD JR

Bugs in trees and kids in labs get their due in a new book by "Canopy Meg"

BY MARIAN SMITH HOLMES

Margaret Lowman, of the New College of Florida, pioneered forest ecology by building the first canopy walkway in North America, in 1991. She recalls her adventures as a scientist and single parent in *It's a Jungle Up There*.

WHY SPEND TIME IN TREES? Almost 50 percent of life on earth is estimated to live in tree canopies, yet this was an unexplored region until about 25 years ago. Much of my work has involved solving the challenge of just getting into the treetops: inventing gadgets, refining hot air balloon design, creating canopy walkways, working from cherry pickers and construction cranes. Once up there, I discovered that insects eat four times more leaf material than we imagined.

IS THAT IMPORTANT? Lots of things stress forests. And with forests becoming warmer, drier and more fragmented, insect outbreaks are predictably one of the first responses to climate change.

YOU'VE TAKEN YOUR TWO SONS, NOW STUDENTS AT PRINCETON, ON RESEARCH TRIPS. Often I had to. When they were 7 and 5, we flew on an old prop plane into the jungles of Belize, where I was building a canopy walkway. We've slept under tarantulas clinging to the thatched ceiling of our hut and done research projects in Australia and Peru. But scientists weren't always tolerant of my children. They were kicked out of Biosphere 2 in Arizona, where I was building a canopy access system. One colleague would not let them near the microscopes in a joint project, even though my children were very adept at identifying bugs. That attitude strengthened my conviction that women need to muscle into the science world.

IT HAS BEEN SAID THAT THE MOTHERS OF YOUNG CHILDREN ARE UNDERREPRESENTED IN THE SCIENCES BECAUSE THEY CAN'T PUT IN THE LONG HOURS. I have experienced chapters in my life when juggling parenting and career put me at a disadvantage. Science needs the brains of women. And since women are the only half of society that can bear children, our system needs to accommodate that. For example, listing child care in a grant budget would be a way to give women more opportunity.

YOUR CANOPY WALKWAYS ARE USED IN SOME PLACES TO PROMOTE TOURISM. WON'T THAT HARM THESE FRAGILE ECOSYSTEMS? Canopy walkways have become a great opportunity for local people to create an income from a forest without logging it, and this is a success for conservation.

YOU SAY YOU MAKE A LIVING CLIMBING TREES. HOW DID YOU GET INTERESTED IN THAT? As a little girl in Elmira, New York, I made tree forts with my best friend, Betsy Hilfiger. We used to rescue birds fallen from their nests. Meanwhile, Betsy's brother Tommy was in their basement stitching bell-bottom jeans. He went on to develop a clothing empire. Now the Hilfigers and I raise funds for the Meg Lowman Treetops Camp for disadvantaged girls, in Elmira, hoping to inspire them in science careers.

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THIS MONTH IN HISTORY

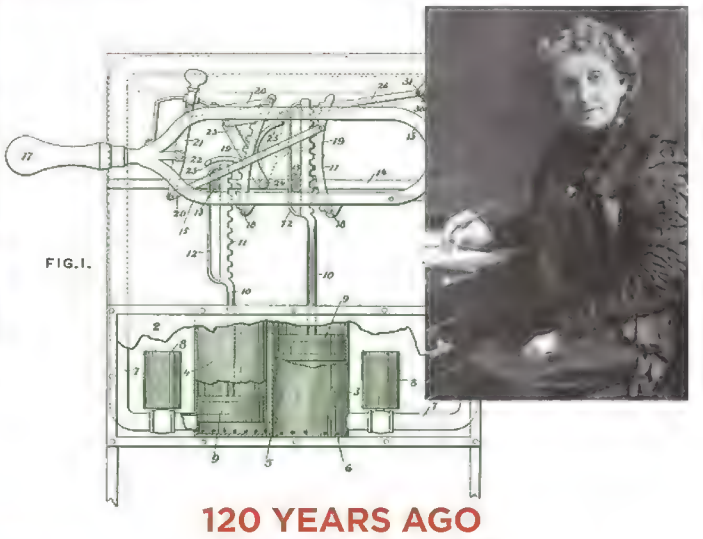
DECEMBER ANNIVERSARIES
MOMENTOUS OR MERELY MEMORABLE

50 YEARS AGO
BABY FACE

The first gorilla born in captivity makes a surprise entrance December 2, 1956, at Ohio's Columbus Zoo. Colo, the four- pound female Western lowland gorilla, arrives unexpectedly—a gorilla's gestation period turns out to be slightly shorter than a human's. Now a mother of 3 and grandmother of 16, Colo is still queen of the Columbus Zoo. Some 1,000 Western lowland gorillas have been born in captivity; 94,000 exist, endangered, in the wild.

20 YEARS AGO
FUEL'S ERRAND

After nine days aboard *Voyager*, an experimental aircraft, pilots Dick Rutan, 48, and Jeana Yeager, 34, land in California December 23, 1986, completing the first nonstop around-the-world flight without refueling. They end the 24,986-mile trip with only 106 pounds of fuel left in the craft's 17 tanks. *Voyager* is now on view at the Air and Space Museum.



120 YEARS AGO
CLEAN MACHINE

Tired of having her dishes chipped by servants, Illinois socialite Josephine Garis Cochran patents the first commercially successful dishwasher December 28, 1886. Wire racks hold the dishes in a boiler while a hand-operated pump shoots sudsy water at them. Cochran builds her business by targeting hotels, and a later version of her invention shines at the 1893 Columbian Exposition. She dies in 1913, age 74; her company evolves into KitchenAid.

60 YEARS AGO
REACHING OUT

The United Nations International Children's Emergency Fund (UNICEF) is created December 11, 1946, to aid children left at risk by World War II. A grade school in Carson, Washington, makes the first donation: $2.16. In 2005 UNICEF spends more than $2 billion on programs to help kids in 157 countries.

90 YEARS AGO
LIVE AND LET DIE

Grigori Rasputin, adviser to Russian czarina Alexandra, whose son suffers from hemophilia, is assassinated December 30, 1916. The "mad monk"—so-called for his licentious behavior, wild looks, reported supernatural powers and medicinal prowess—is detested by aristocrats for his influence over the czar. Plied with poisoned wine by conspirators, Rasputin doesn't die. Prince Felix Yusupov shoots him; still he lives. After two more shots, the killers toss him into the Neva River, where Rasputin finally dies, age 44.

230 YEARS AGO THE RIVER IS WIDE

Pelted by sleet and rain, George Washington leads 2,400 troops, 18 cannons and some 75 horses across the Delaware River from Pennsylvania into New Jersey (by night, rather than in daylight as depicted in Emanuel Leutze's fanciful 1851 painting) on December 25, 1776. The general's successful surprise attack on a Hessian outpost at Trenton reinvigorates the flagging American cause and ensures Washington's fame as a strategist.

{ BY ALISON McLEAN }

Visit Smithsonian.com for "Today in History."

CLOCKWISE FROM TOP LEFT: SCALED COMPOSITES; COLUMBUS ZOO COLLECTION; U.S. PATENT OFFICE; HOBART COLLECTION; SHEHZAD NOORANI / PETER ARNOLD; "GEORGE WASHINGTON CROSSING THE DELAWARE RIVER," 1851. EMANUEL LEUTZE / GRANGER COLLECTION, NEW YORK (2)

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To revive the tradition of Kutchi embroidery and in so doing provide vital income for the region's impoverished women.

Rory Wilson

To invent an electronic logger that monitors the energy use of endangered species, whatever their native environment.

Alexandra Lavrillier

To preserve the nomadic culture of the Evenk by setting up a nomadic school teaching traditional skills alongside modern subjects.

Brad Norman

To create a global whale shark photo-identification system that charts the sharks' migratory routes, thereby aiding their conservation.

Pilai Poonswad

To convert southern Thailand's hornbill poachers into the birds' protectors and so help save the species.

At a gala ceremony in Singapore on October 26th, Rolex announced the winners of the 12th Rolex Awards for Enterprise. For the past 30 years, the Rolex Awards for Enterprise have been assisting individuals whose groundbreaking endeavors expand our knowledge of the world or improve the lot of humankind. Selected by a distinguished international panel of experts, each Laureate received a gold Rolex chronometer and $100,000 toward the realization of his or her vision. Support that should help them achieve their goals. Which, of course, are ours too.

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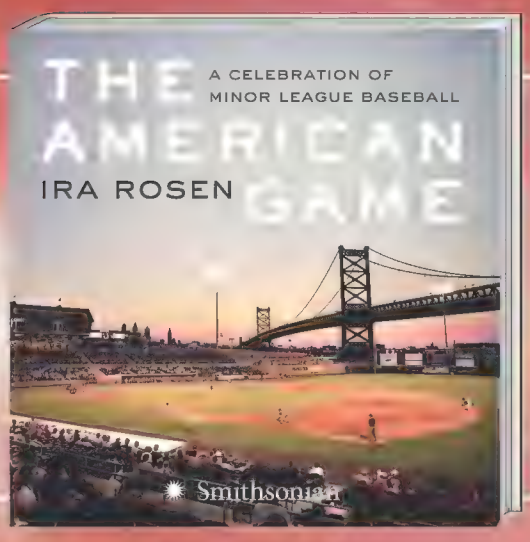

Photographer and writer Ira Rosen visits notable minor league baseball stadiums and interviews major and minor leaguers on their hopes of making it to "the bigs."
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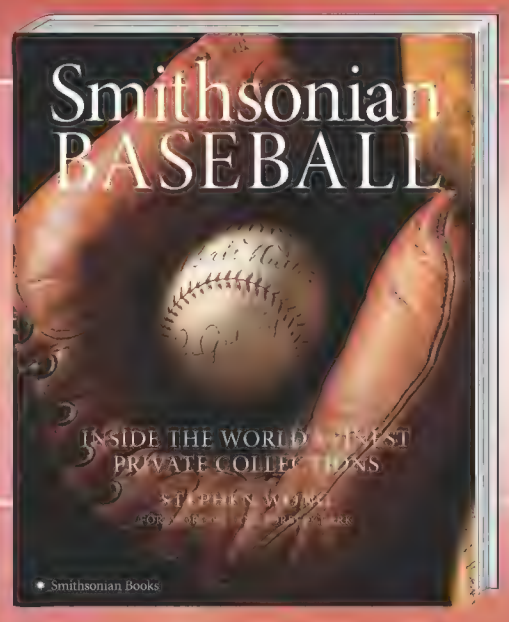

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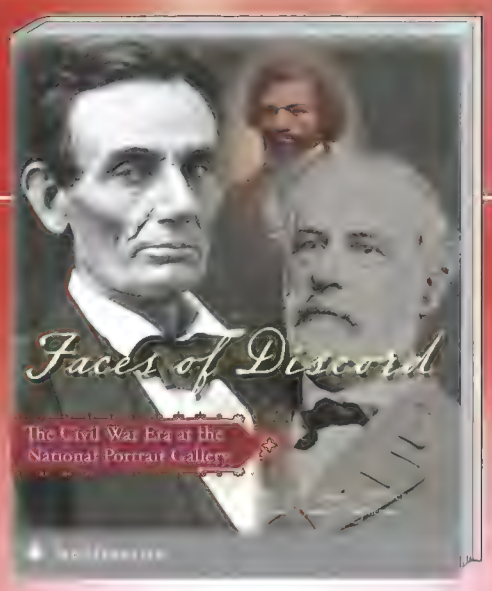

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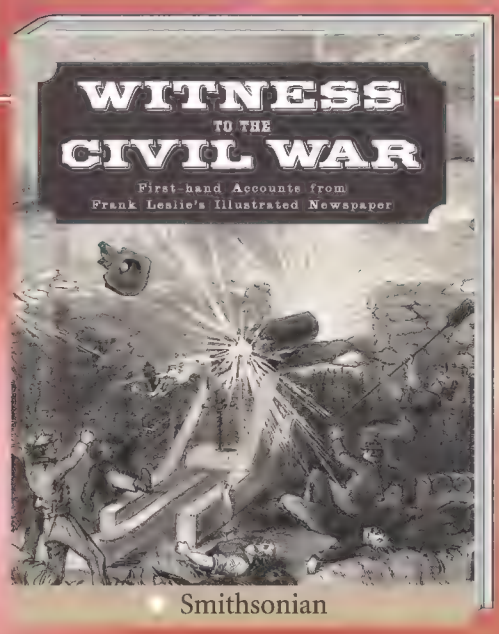

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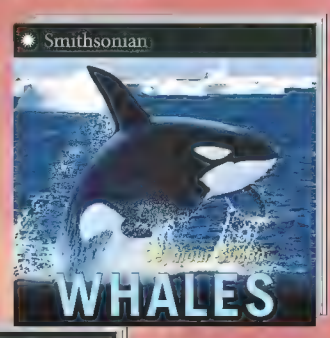

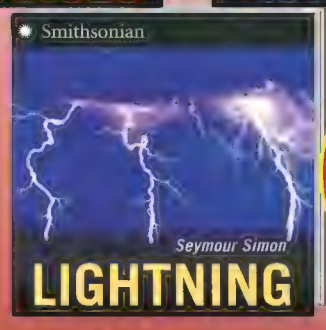

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Around the Mall

SCENES AND SIGHTINGS FROM THE SMITHSONIAN MUSEUMS AND BEYOND

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ART FOR NATURE'S SAKE

This past September, seven artists clambered aboard canoes in the backwoods of Quebec for an 18-day, 140-mile river journey supported by the Smithsonian Institution to raise awareness of new threats to the continent's largest uninterrupted forest. The boreal, or northern, forest stretches more than two million square miles across Canada and into Alaska. It is home to nearly half of North

GARY AND JOANIE MCGUFFIN

The 140-mile journey on Canada's George River called for artists who could paddle.

BOREAL FOREST

{ CONTINUED FROM PAGE 29 }

America's bird species, depending on the season. Scientists say the forest consumes so much atmospheric carbon dioxide and generates so much oxygen that, like the Amazon rain forest, it regulates the earth's climate.

Recent proposals to expand logging, mine metals and drill for natural gas in the forest worry scientists and nature-lovers. In a troubling sign, researchers have documented serious population drops in 13 bird species in drained wetlands and heavily logged areas. Environmentalists are working to expand restrictions on industry in the mostly government-owned boreal forest, less than 10 percent of which is currently off-limits. "Protecting the integrity of the boreal region over the long term is key to the sustainability and well-being of communities that rely on it," the Boreal Leadership Council has said. The consortium of First Nations groups, conservation organizations and energy and paper companies is lobbying governments to designate half the boreal as protected.

Robert Bateman: "A garden of Eden."

The world's largest herd of caribou, estimated in the hundreds of thousands, roams the boreal's George River region.

One organizer of the art trek was Stephen Loring, an anthropologist at the Smithsonian's Arctic Studies Center, who has long been working with local Innu people and looking for evidence of human cultures tens of thousands of years old. "People have always been a part of the boreal landscape," he says. More than 600 Native communities still live there.

The expedition started at Indian House Lake, then headed north up the George River—or, rather, down the river, which runs north near the Labrador border to where the boreal's treed landscape meets the tundra. The artists slept in 20-degree weather and woke to snow on several mornings, says Robert Mullen, a Vermont artist who helped organize the venture. But the expedition was "not a macho canoe trip," he says.

Most boreal animals have never seen people. "You get animals that just don't know what you are," says Mullen. During the trip, a short-tailed weasel ran up to him, sniffed his leg and ran across his foot. Mullen and two others were hiking when they saw a small herd of caribou, animals known regionally as gray ghosts because they are shy and blend into the forest. "Be like a caribou!" photographer Joanie McGuffin said, and put her arms in the air like antlers. The others mimicked her—and the animals moved in all around them, affording rare close-up views.

The 76-year-old artist Robert Bateman, celebrated for his animal portraits and more than a dozen books about nature, spent a day with the group, sketching and gathering ideas for a caribou painting. He says the expanses of tundra, with their low mosaics of ground cover and clumps of spruce and tamarack, offer extraordinary wide-open scenes to sketch.

Loring says an exhibition of boreal forest artworks, featuring sketches, photographs and paintings from this past fall's expedition, will open at the National Museum of Natural History in 2008. Bateman is encouraged. "We need to focus public attention on the top end of the boreal forest," he says, "because it's completely forgotten."

{ BY KATY JUNE-FRIESEN }

Less than 10 percent of the vast forest wilderness is off-limits to industry; environmentalists want to change that.

GARY AND JOANIE MCGUFFIN (3)

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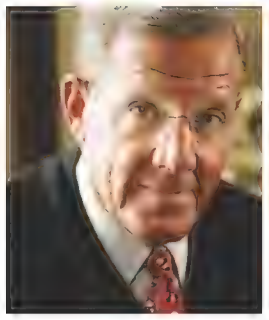

JUST ABOUT EVERYBODY has a boss. At the Smithsonian Institution, where the chief executive officer is known as the Secretary, the ultimate authority has been vested by law in its Board of Regents since the Institution's establishment 160 years ago.

There's obvious uniqueness to the Smithsonian. It was established by Congress in 1846 as a trust for the American people in response to a large bequest from an obscure British scientist named James Smithson. The Smithsonian, to be located in Washington, D.C., was not to be a part of any branch of the federal government; rather, it was to be guided by an independent Board of Regents, or trustees, composed of the chief justice of the United States, the vice president of the United States, three members of the U.S. Senate, three members of the U.S. House of Representatives and six private citizens. (Today, the number of citizens has increased to nine, seven of whom must come from different states and two from the District of Columbia.) Then as now, the Regents' composition is designed to show that the Smithsonian has both private- and public-sector elements and is linked to all branches of the federal government.

The chief justice and the vice president serve by virtue of their office. The senators and members of the House are appointed by the leadership in both chambers of Congress and serve terms that match their elected terms. Citizen members of the Board of Regents, who can serve two six-year terms, are nominated by the Board and appointed by joint resolutions of Congress that are signed into law by the president of the United States. The Regents elect their own chairman, who is known as the Chancellor of the Institution. Throughout Smithsonian history, the Regents have traditionally elected the chief justice to this position. By law, the Regents are not paid for their service, though they may be reimbursed for expenses they incur coming to meetings.

The Regents exercise their authority in four meetings each year. Three are dedicated to the full range of matters relating to the overall operational management of the Smithsonian—budgets, terms and conditions of philanthropic gifts, appointments to advisory boards, exhibitions and education programs, investment of the Institution's endowment, acceptance of new collections, commercial business activities, and the like. The fourth meeting is devoted to long-range planning. Much of the Regents' work is carried out between these meetings by the Regents' committees, including its Executive Committee, its Finance and Investment Committee, its Audit and Review Committee, its Nominating Committee, and its Committee on Compensation and Human Resources. In addition, the Regents often establish committees to tackle special challenges. Any significant initiative taken by the Smithsonian requires the support of the Board of Regents.

Attending the January 2006 Regents meeting were (seated from left): Dr. Walter E. Massey, Senator Patrick J. Leahy, Senator William H. Frist, M.D., Mr. Roger W. Sant, Chief Justice John G. Roberts Jr., Smithsonian Secretary Lawrence M. Small (non-Regent), Dr. Shirley Ann Jackson, Mr. Eli Broad, and (standing from left): Representative Ralph Regula, Ms. Anne d'Harnoncourt, Chair of the Smithsonian National Board Patricia Frost (non-Regent), Mr. Alan G. Spoon, Representative Xavier Becerra, Mr. Robert P. Kogod, Dr. Manuel L. Ibáñez, Representative Sam Johnson, Ms. Patricia Q. Stonesifer, Senator Thad Cochran. (Vice President Richard B. Cheney was absent. In May, Dr. Ibáñez retired and was replaced by Dr. Phillip Frost.)

Perhaps the single most important action the Regents take is the appointment of a Secretary to head up the management of the Smithsonian Institution. Secretaries don't serve forever (there have been 11 since 1846), but the Board of Regents is perpetual and, time and again, has proved itself invaluable for the Institution's long-term vitality.

LAWRENCE M. SMALL
SECRETARY OF THE SMITHSONIAN INSTITUTION

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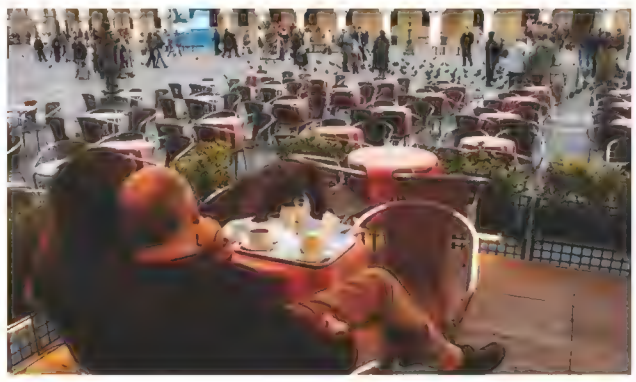

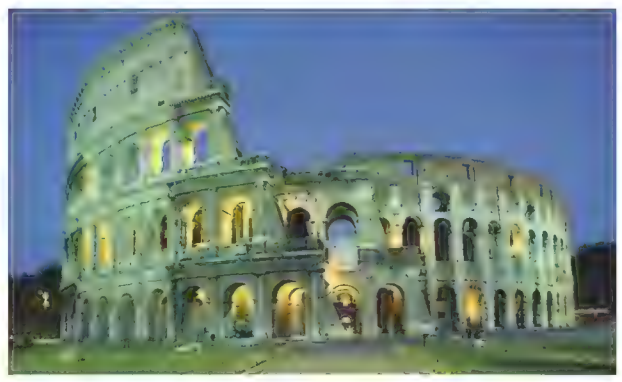

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THE OBJECT AT HAND | Shopping Bag

COOPER-HEWITT, NATIONAL DESIGN MUSEUM

SACKS APPEAL

Attention shoppers: just what you need—one more seasonal ornament

BY OWEN EDWARDS

AT THIS TIME OF YEAR, the Consumer Confidence Index—the measure that gauges how we feel about reaching into our pockets and shuffling our decks of credit cards—rises to the point where it could be called the Consumer Irrational Exuberance Index. Streets and stores bustle with eager optimists; shopping proceeds guilt-free, since (we tell ourselves) the spending serves to make other people happy. And hardly a creature is stirring who isn't clutching that bright icon of the holiday season, the shopping bag.

For some Manhattan sybarites, the department store's 1982 bag spelled Christmas.

Shopping bags, those testimonial totes signaling the consumer preferences of those who carry them, by now constitute part of the nation's mercantile history. In 1978, the Smithsonian's Cooper-Hewitt Museum in New York City mounted an exhibit showcasing more than 125 bags-as-art, each the result of relatively recent marketing advances. "The bag with a handle attached cheaply and easily by machine has existed only since 1933," wrote curator Richard Oliver. "By the late 1930's the paper bag . . . was sufficiently inexpensive to produce so that a store could view such an item as a 'giveaway.' "

Today, according to Cooper-Hewitt curator Gail Davidson, the museum's collection has grown to some 1,000 bags, among them a cheery 1982 Bloomingdale's tote emblazoned with a holiday scene.

A signature bag, at least those from certain department stores, has long had the power to reassure the shopper. My mother used to venture into New York City only once or twice a year—to shop at Saks Fifth Avenue; the rest of the time, she patronized less glamorous New Jersey emporiums. But she always carried her purchases in carefully preserved Saks bags.

Until the 1960s, the shopping bag served to implement straightforward branding strategies, trumpeting, for example, the distinctive blue of Tiffany. By the 1980s, however, Bloomingdale's pioneered a more elaborate approach, introducing an ever-changing series of shopping bags: almost overnight, they came into their own as design objects. This innovation was the brainchild of John Jay, who took over as Bloomingdale's creative director in 1979 and guided the store's marketing until 1993.

Jay commissioned up to four or five bags annually, each featuring the work of various artists, architects or designers. "I wanted each bag to be a statement of the times," he recalls. "We did bags about the rise of postmodernism, the influence of the Lower East Side art movement, the Memphis design movement in Italy."

Architect Michael Graves, fashion illustrator Antonio Lopez and designer Ettore Sottsass, among others, pro-

MATT FLYNN/COOPER-HEWITT MUSEUM, S.I.; PCL/ALAMY

duced the Bloomingdale's bags. The Bloomingdale's logo was not to be seen. (The Christmas bag pictured here, with its holiday depiction of the store itself, is a rare exception.) "The appeal for famous artists certainly was not the money," says Jay, "since we paid only $500, if that. But there was a creative challenge. We wanted to build a brand by constant surprise and creative risk—something that's missing from retail today."

Bag consciousness tends to be missing too, or at least is in decline. While some stores can still be identified by signature carryalls, Davidson observes that shopping bags are no longer the high-profile totems they once were. "I don't seem to see a real variety of bags these days," she says. "We still have some come in to the museum, but no longer in large quantities."

Bloomies' bags won awards and attracted press attention. Jay even remembers a photograph of President Jimmy Carter, boarding the presidential helicopter, a Bloomingdale's bag in hand. On the international scene too, bags morphed into symbols of quality. Rob Forbes, founder of the furniture retailer Design Within Reach, recalls that in the 1980s, he lined a wall of his London apartment with "incredible bags, very seriously made."

The last bag Jay commissioned, from Italian fashion designer Franco Moschino in 1991, caused a ruckus. It depicted a woman wearing a beribboned headdress, its color scheme the red, white and green of the Italian flag, adorned with the motto "In Pizza We Trust." After the Italian government objected to such irreverence, the bag was quietly pulled.

On eBay recently, I came across a green shopping bag stamped with the gold logo of Marshall Field's in Chicago, now a Macy's. The description under the item said simply: "The store is history." So, it seems, are the bags that we, our mothers, and even Jimmy Carter, dearly loved.

OWEN EDWARDS *is co-author, with Betty Cornfeld, of* Quintessence: The Quality of Having "It."

Planet Found!

Scientists say speedster is like a giant ball of cork

HAT-P-1b (in illustration) zips around its star in just 4.5 days.

Scientists at the Harvard-Smithsonian Center for Astrophysics have discovered a planet that existing theories can't explain. The planet, HAT-P-1b, is far beyond our solar system, orbiting a star 450 light-years away. Using small telescopes in Arizona and Hawaii in a network developed by Smithsonian's Gaspar Bakos, astronomers inferred the planet's presence from a shadow that passed in front of the parent star. Of more than 200 planets that scientists worldwide have discovered around distant stars, only about a dozen have been detected using this technique, which allows astronomers to estimate a planet's size.

What a strange planet this one is, at least by the standards of our neighborhood. It orbits its star at high speed, covering a distance less than 6 percent of Earth's orbit in just 4.5 days. Also, HAT-P-1b is huge, with a diameter 1.4 times that of Jupiter, yet has only about half of Jupiter's mass, giving it about the same density as cork. The scientists speculate that such expansiveness is caused by heat from the planet's interior, but that only raises another question: Where did the heat come from? HAT-P-1b is easing scientific minds in one way. It suggests that a previously discovered "puffy planet" with an orbit close to its parent star was no fluke. In fact, says Smithsonian astrophysicist Robert Noyes, it might be that such "seemingly inflated" planets "are not all that uncommon." { BY KATY JUNE-FRIESEN }

Who's Counting?

992 predatory marine gastropod specimens from the Pacific coast of Panama join the holdings at the National Museum of Natural History. The three-inch *Phyllonotus regius* snail devours oysters and clams by drilling into their shells and sucking out the meat.

DAVID A. AGUILAR / HARVARD-SMITHSONIAN CENTER FOR ASTROPHYSICS; BRENDAN MCCABE

What's Up

ESCALATE Stairway to heaven? Not quite. A French guildsman crafted this foot-high pearwood-and-walnut spiral c. 1820-40. Exquisite stair models from France and England are at the Cooper-Hewitt until June 3.

CLOCKWISE FROM TOP LEFT: JOSEPH AND ROBERT CORNELL MEMORIAL FOUNDATION / VAGA / SAAM; EUGENE AND CLARE THAW GIFT / COOPER-HEWITT MUSEUM, S.I.; DONALD HENDRICKS / ANACOSTIA COMMUNITY MUSEUM, S.I.; JEAN CHASSAING, RENNERT COLLECTION / NPG, S.I.; VIGO HISTORICAL SOCIETY

ASSEMBLYMAN

Collagist Joseph Cornell (1903-72) didn't paint or draw, but his boxes (a 1930s "cabinet") and movies inspired Andy Warhol and piqued Salvador Dali. A big retrospective packs into American Art through February 19.

WORLD AT WAR

The Seven Years' War (to 1763) spanned three continents and involved nine European powers. Paintings and artifacts (a British soldier's coat) occupy the Ripley Center starting December 15.

JAZZ-AGE GODDESS

Missouri-born Josephine Baker (1906-75)—a cabaret star and secret agent in her adopted France and a U.S. civil rights activist—got 1,500 marriage proposals (she accepted only four). Her story unfolds at the Portrait Gallery through March 18.

{ BY AMY CRAWFORD }

MAKE BELIEVE?

At the Anacostia Museum until April 29, African-American paper dolls from the past 150 years (a 2000 Sally Hemings) both reflect and overcome racial stereotypes.

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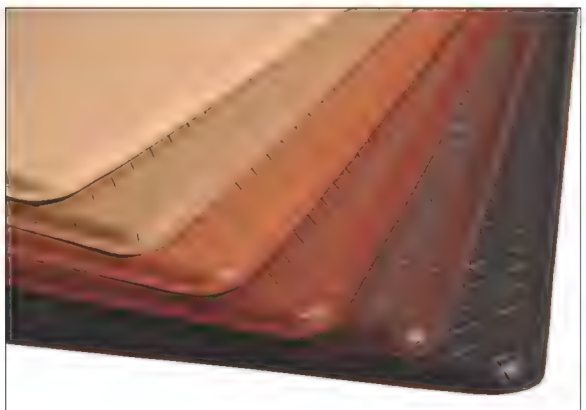
{ LASTMINUTE GIFT GUIDE }



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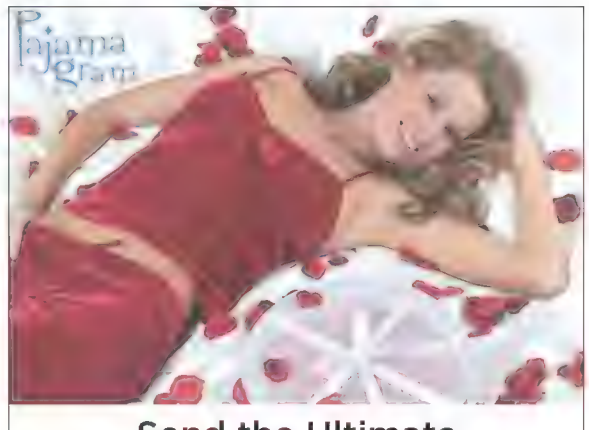

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LIVING WITH GEESE

Novelist and gozzard Paul Theroux ruminates about avian misconceptions, anthropomorphism and *March of the Penguins* as "a travesty of science"

BY PAUL THEROUX
PHOTOGRAPH BY DANA EDMUNDS

WHEN I FIRST BEGAN TO RAISE GEESE, in Hawaii, my more literate friends asked me, "Have you read the E. B. White piece?" This apparently persuasive essay was all that they knew about geese other than the cliché, often repeated to me, "Geese are really aggressive! Worse than dogs!" or "They're everywhere!"—regarding them as an invasive species, spoiling golf courses. Received wisdom is not just unwise, it is usually wrong. But I was well disposed toward E. B. White. In his writing he is the kindest and most rational observer of the world. And a man who can write the line "Why is it . . . that an Englishman is unhappy until he has explained America?" is someone to cherish.

Author Theroux (at home on Oahu) marveled at his geese's ingeniousness and their "meddling curiosity."

Though I had read much of White's work, I had not read his essay "The Geese." I avoided it for several reasons. The first was that I wanted to discover the behavior of these birds, their traits and inclinations, on my own, at least in the beginning. I loved the size of geese, their plumpness, their softness, the thick down, the big feet of fluffy just-born goslings, the alertness of geese—sounding an alarm as soon as the front gate opened; their appetites, their yawning, the social behavior in their flocking, their homing instinct, the warmth of their bodies, their physical strength, their big blue unblinking eyes. I marveled at their varieties of biting and pecking, the way out of sheer impatience a goose wishing to be fed quickly would peck at my toes, just a reminder to hurry up; the affectionate and harmless gesture of pecking if I got too close; the gander's hard nip on the legs, the wicked bite on my thigh, which left a bruise. I also marveled at their memory, their ingeniousness in finding the safest places to nest; their meddling curiosity, always sampling the greenery, discovering that orchid leaves are tasty and that the spiky stalks of pineapple plants are chewable and sweet.

"In his writing," Theroux says, E. B. White (on his Maine farm c. 1970) "is the kindest and most rational observer of the world."

But it was the second and more important reason that kept my hand from leaping to the shelf and plucking at the *Essays of E. B. White*. It was White's conceits, his irrepressible anthropomorphism, his naming of farm animals, making them domestic pets, dressing them in human clothes and giving them lovable identities, his regarding them as partners (and sometime personal antagonists). Talking spiders, rats, mice, lambs, sheep and pigs are all extensions of White's human world—more than that, they are in many cases more sensitive, more receptive, truer chums than many of White's human friends.

But here's the problem. White's is not just a grumpy partiality toward animals; rather, his frequent lapses into anthropomorphism produce a deficiency of observation. And this sets my teeth on edge, not for merely being cute in the tradition of children's books, but (also in the tradition of children's books) for being against nature.

Animal lovers often tend to be misanthropes or loners, and so they transfer their affection to the creature in their control. The classics of this type are single species obsessives, like Joy Adamson, the *Born Free* woman who raised Elsa the lioness and was celebrated in East Africa as a notorious scold; or Dian Fossey, the gorilla woman, who was a drinker and a recluse. "Grizzly man" Tim Treadwell was regarded, in some circles, as an authority on grizzlies, but Werner Herzog's documentary shows him to have been deeply disturbed, perhaps psychopathic and violent.

Assigning human personalities to animals is the chief trait of the pet owner—the doting dog-lover with his baby talk, the smug stay-at-home with a fat lump of fur on her lap who says, "Me, I'm a cat person," and the granny who puts her nose against the tin cage and makes kissing noises at her parakeet. Their affection is often tinged with a sense of superiority. Deer and duck hunters never talk this way about their prey, though big game hunters—Hemingway is the classic example—often sentimentalize the creatures they blow to bits and then lovingly stuff to hang on the wall. The lion in Hemingway's story "The Short Happy Life of Francis Macomber" is sketched as one of the characters, but that is perhaps predictable given Hemingway's tendency to romanticize what have come to be called charismatic megafauna. Moby-Dick is wicked and vengeful, and Jaws was not a hungry shark but a villain, its big teeth the very symbol of its evil. And goodness is embodied in the soulful eyes of a seal pup, so like a 6-year-old that at seal culling season you find celebrities crawling across ice floes to cuddle them.

THE LITERATURE OF PETS, or beloved animals, from *My Dog Tulip* to *Tarka the Otter*, is full of gushing anthropomorphists. The writers of nature films and wildlife documentaries are so seriously afflicted in this way they distort science. How many ant colonies have you seen on a TV screen while hearing, "Just putting that thing on his back and toil-

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PAUL THEROUX *is working on a new travel book, which retraces the route of his bestselling* The Great Railway Bazaar.

E.B. WHITE ESTATE

ing with his little twig and thinking, I've just got to hang on a little while longer," speaking of the ant as though it's a Nepalese Sherpa.

Possibly the creepiest animals-presented-as-humans film was *March of the Penguins*, a hit movie for obviously the very reason that it presented these birds as tubby Christians marooned on a barren snowfield, examples to be emulated for their family values. When a bird of prey, unidentified but probably a giant petrel, appears in the film and dives to kill a chick, the carnage is not shown nor is the bird identified. The bird is not another creature struggling to exist in a snowfield but an opportunistic mugger from the polar wastes. We are enjoined to see the penguins as good and the giant petrel as wicked. With this travesty of science people try to put a human face on the animal world.

This is perhaps understandable. I've named most of my geese, if only to make sense of which one is which, and they grow into the name. I talk to them. They talk back to me. I have genuine affection for them. They make me laugh in their wrongheadedness as well as in the ironies of their often-unerring instincts. I also feel for them, and I understand their mortality in ways they cannot. But even in the pathos, which is part of pet owning, I try to avoid anthropomorphizing them, which is the greatest barrier to understanding their world.

White's children's classic *Charlotte's Web* comes to movie screens this month, with Julia Roberts as the spider's voice.

But E. B. White patronizes his geese and invents feelings for them and obfuscates things. After years of goose rearing, I finally read his essays and, as I feared, was in the company of a fanciful author, not an observant gozzard, or goose rearer. Here was "a gander who was full of sorrows and suspicions." A few sentences later the gander was referred to as "a grief-crazed old fool." These are the sentimentalities you find in children's books. A goose in White's "classic" story about a spider, *Charlotte's Web*, says to Wilbur the pig, "I'm sitting-sitting on my eggs. Eight of them. Got to keep them toasty-oasty-oasty warm."

Edward Lear was also capable of writing in this whimsical vein, yet his paintings of birds rival Audubon's in dramatic accuracy. Lear could be soppy about his cat, but he was clearsighted the rest of the time. E. B. White is never happier than when he is able to depict an animal by humanizing it as a friend. Yet what lies behind the animal's expression of friendship? It is an eagerness for easy food. Feed birds and they show up. Leave the lids off garbage cans in Maine and you've got bears—"beggar bears" as they're known. Deer love the suburbs—that's where the easiest meals are. Woodchucks prefer dahlias to dandelions. The daily imperative of most animals, wild and tame, is the quest for food, which is why, with some in your hand, you seem to have a pet, if not a grateful pal.

White's geese are not just contented but cheerful. They are also sorrowful. They are malicious, friendly, broken-spirited. They mourn. They are at times "grief-stricken." White is idiosyncratic in distinguishing male from female. He misunderstands the cumulative battles that result in a dominant gander—and this conflict is at the heart of his essay. He seems not to notice how at the margins of a flock they bond with each other—two old ganders, for example, keeping each other company. It seems to White that geese assume such unusual positions for sex that they've consulted "one of the modern sex manuals." Goslings are "innocent" and helpless. When I came across the gander White singled out as "a real dandy, full of pompous thoughts and surly gestures," I scribbled in the margin, "*oh, boy*."

During ten years of living among geese and observing them closely, I have come to the obvious conclusion that they live in a goose-centric world, with goose rules and goose urgencies. More so than ducks, which I find passive and unsociable, geese have a well-known flocking instinct, a tendency to the gaggle. This is enjoyable to watch until you realize that if there is more than one gander in the flock, they will fight for dominance, often quite vocally.

Their sounds vary in pitch and urgency, according to the occasion, from wheedling murmurs of reedy ingratiation, along with the silent scissoring of the beak, as they step near knowing you might have food, to the triumphant squawk and wing-flapping of the gander after he has suc-

GARTH WILLIAMS / HARPER COLLINS

cessfully put to flight one of his rivals. In between are the *ark-ark-ark* of recognition and alarm when the geese see or hear a stranger approach. Geese have remarkable powers of perception (famously, geese warned the Romans of the Gallic invasion in 390 B.C.); the hiss of warning, almost snake-like, the beak wide open, the agitated honk with an outstretched neck, and—among many other goose noises—the great joyous cry of the guarding gander after his mate has laid an egg and gotten off her nest. Ducks quack, loudly or softly, but geese are large eloquent vocalizers, and each distinct breed has its own repertoire of phrases.

MY FIRST GEESE began as three wobbly goslings, scarcely a day old, two ganders and a goose. The goose became attached to one of the ganders—or perhaps the other way round; the superfluous gander became attached to me—indeed "imprinted" on me so deeply that even years later he will come when called, let his feathers be groomed, scratched and smoothed, and will sit on my lap without stirring, in an astonishing show of security and affection. Konrad Lorenz describes this behavior as resulting from a gosling's first contact. Affection is of course the wrong word—mateship is more exact; my gander had found a partner in me because his mother was elsewhere and no other goose was available.

Known for their watchfulness, geese sounded the alarm when Gauls attempted a nighttime raid on Rome in 390 B.C.

Every day of the year my geese range over six sunny Hawaiian acres. Penning or staking them, as some gozzards do in northern latitudes, is unthinkable. White mentions such captivity in his essay but makes no judgment: it is of course cruel confinement, maddening big birds, which need lots of space for browsing, rummaging and often flying low. When it comes time to sex young geese, the process is quite simple: you tip the birds upside down and look at the vent in their nether parts—a gander has a penis, a goose doesn't. A little later—weeks rather than months—size and shape are the indicators; the gander is up to a third bigger than the goose.

White never mentions the breed of his geese, another unhelpful aspect of his essay, but if they were Embdens, the gander would be 30 pounds at maturity and the goose five to ten pounds lighter; English gray geese are bigger, China geese a bit smaller, and so forth, but always the gander heavier than his mate. I have raised Toulouse geese, China geese, Embdens and English grays. Toulouse are usually overwhelmed by the Embdens, which seem to me to have the best memories and the largest range of sounds. Embdens are also the most teachable, the most patient. China geese are tenacious in battle, with a powerful beak, though a full-grown English gray gander can hold its ground and often overcome that tenacity.

Spring is egg-laying time. When there is a clutch of ten or a dozen eggs, the goose sits on them and stays there in a nest made of twigs and her own fluffy breast feathers. The goose must turn her eggs several times a day, to spread the heat evenly. Performing this operation hardly means withdrawing from the world, as White suggests. Though a sitting goose has a greatly reduced appetite, even the broodiest goose gets up from her nest now and then, covers her warm eggs with feathers and straw and goes for a meal and a drink. The gander stands vigil and, unusually possessive in his parental phase, fights off any other lurking ganders. When the goslings finally appear, they strike me as amazingly precocious—indeed the scientific word for their condition is precocial, which means they are covered with soft feathers and capable of independent activity almost from the moment of hatching. After a few days they show all the traits of adult behavior, adopting threat postures and hissing when they are fearful.

An established gander will carefully scrutinize new goslings introduced into his flock. It is simply a bewildered gander being a gander, acting out a protective, perhaps paternal possessive response. It is acting on instinct, gauging where the goslings fit in to his society. Their survival depends on it.

Geese develop little routines, favorite places to forage, though they range widely and nibble everything; they get to like certain shady spots, and through tactical fighting, using opportunities, they establish leadership; they stay together, they roam, and even the losers in the leadership bat-

AKG-IMAGES

tles remain as part of the flock. White's geese, which had to endure the hard Maine winters, were often confined to a barn or a pen, which are prisons producing perverse overreactive, defensive, aggressive behavior, as all prisons do.

The gander takes charge in normal surroundings: it is part of his dominance—keeping other ganders away. He rules by intimidation. He is protective, attentive and aggressive in maintaining his superior position among all the other birds, and will attack any creature in sight, and that includes the FedEx deliveryman way up at the front gate. When young ganders grow up, they frequently challenge the older one. The victor dominates the flock, and the goslings have a new protector. The old gander has merely lost that skirmish and has withdrawn, because he is winded and tired and possibly injured. But win or lose they remain with the flock. Defeated ganders go off for a spell to nurse their wounds, but they always return. One of the most interesting aspects of a flock is the way it accommodates so many different geese—breeds, sexes, ages, sizes. Ganders go on contending, and often an old gander will triumph over the seemingly stronger young one. Only after numerous losing battles do they cease to compete, and then a nice thing happens: the older ganders pair up and ramble around together at the back of the flock, usually one protecting the other.

Strong bonds—and misconceptions—develop between humans (a woman with a balanced pet in Yunnan, China) and geese.

There is a clue to White's self-deception in this part of the essay: "I felt very deeply his sorrow and his defeat." White projects his own age and insecurity onto the gander. "As things go in the animal kingdom, he is about my age, and when he lowered himself to creep under the bar, I could feel in my own bones his pain at bending down so far." This essay was written in 1971, when White was a mere 72, yet this is the key to the consistent anthropomorphism, his seeing the old gander as an extension of himself—a metonymical human, to use French anthropologist Claude Levi-Strauss' definition of such a pet. The essay is not strictly about geese: it is about E. B. White. He compares the defeated gander to "spent old males, motionless in the glare of the day" on a park bench in Florida. He had shuttled back and forth from Maine to Florida; his anxiety is real. He mentions summer sadness twice in his essay, a melancholy that may sadden a person precisely because the day is sunny.

What saddens me about this confident essay is that White misses so much. Because he locks up his geese at night, he never sees the weird sleeping patterns of geese. They hardly seem to sleep at all. They might crouch and curl their necks and tuck their beaks into their wings, but it is a nap that lasts only minutes. Do geese sleep? is a question that many people have attempted to answer, but always unsatisfactorily. If they are free to ramble at night, geese nap in the day. However domesticated a goose, its wakefulness and its atavistic alertness to danger has not been bred out of it.

Their alliances within a flock, their bouts of aggression and spells of passivity, their concentration, their impulsive, low, skidding flights when they have a whole meadow to use as a runway, the way they stand their ground against dogs or humans—these are all wonders. I find them so remarkable, I would not dream of eating a goose or selling a bird to anyone who would eat it, though I sometimes entertain the fantasy of a goose attacking a gourmet and eating his liver.

There are many more wonders: the way they recognize my voice from anyone else shouting and how they hurry near when called; or follow me because they know I have food in my bulging hand. They will follow me 300 yards, looking eager and hungry. I have mentioned their inexhaustible curiosity—sampling every plant that looks tasty, as well as pecking at objects as though to gauge their weight or their use. Their digestive system is a marvel—almost nonstop eating and they never grow fat (*Why Geese Don't Get Obese (And We Do)* is a recent book on animal physiology); their ability to drink nothing but muddy water with no obvious ill effects; and with this their conspicuous preference for clean water, especially when washing their heads and beaks, which they do routinely. Their calling out to a mate from a distance, and the mate rushing to their side; or if one becomes trapped under a steepness or enmeshed in a fence, and sounds the faint squawk of helplessness, the other will

CRISTINA MITTERMEIER

Three Embden geese gaggle to reinforce their social order. "Embdens are the most teachable," says author Theroux (with an Embden gander he raised from a gosling).

stay by, until it is released. Their capacity to heal seems to me phenomenal—from a dog bite, in the case of one gander I had that was at death's door for more than a month, or from the bite of another gander in one of their ritual battles for supremacy. Such conflicts often result in blood-smeared breast feathers. Their ability to overcome internal ailments is a wonder to behold.

I had an old, loud China gander that was displaced by a younger gander—his son, as a matter of fact, who ended up with the old goose we named Jocasta. From the time of Adam, we humans have had an urge to name the birds of the sky and the beasts of the field. The old gander may have been defeated by the son, but he remained feisty. Then he became ill, got weak, ate very little, couldn't walk, sat only in shade and moaned. He was immobilized. I dissolved in water some erythromycin I got at the feed store and squirted it down his throat with a turkey baster, and added some more to his water.

Several weeks went by. He lost weight, but I could see that he was sipping from his dish. From time to time I carried him to the pond—he paddled and dipped his head and beak, but he was too weak to crawl out. Still he seemed to respond to this physiotherapy. After a month he began to eat. One morning, going out to give him more medicine, I saw that he was standing and able to walk. I brought him some food, and as I put the food in his dish he took a few steps toward me and bit me hard on the thigh, giving me a purple prune-size bruise. This is not an example of irony or ingratitude. It is goosishness. He was thankfully himself again.

ROBERT ESTALL / CORBIS; JAC DE VILLIERS /HANDS THAT SHAPE HUMANITY

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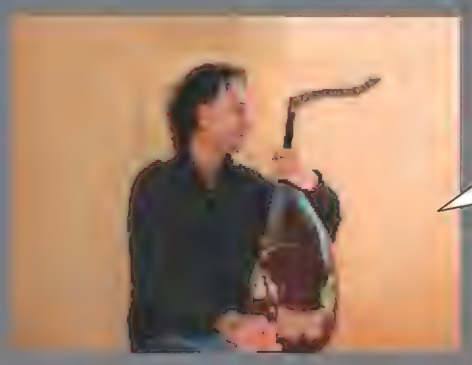

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BY JOSHUA HAMMER
PHOTOGRAPHS BY ALYSSA BANTA

THE TREA
OF TIMB

SURES UKTU

Preservationists (including Allimam Achahi, far left, and Abdel Kader Haidara) are trying to rescue the city's rare manuscripts from centuries of neglect. "They must be protected," says Haidara.

Preservationists are raising funds to translate collections (one of the largest private holdings in Timbuktu, above) into English and French. "The manuscripts show that Islam is a religion of tolerance," says Abdel Kader Haidara. "We need to show the truth."

WHITE ROBE fluttering in the desert breeze, Moctar Sidi Yayia al-Wangari leads me down a sandy alley past donkeys, idle men and knapsack-toting children rushing off to school. It is a bright morning, my second in Timbuktu, in the geographic center of Mali, and al-Wangari is taking me to see the project that has consumed him for the past three years. We duck through a Moorish-style archway and enter his home, a two-story stone structure built around a concrete courtyard. With an iron key, he unlocks the door to a storage room. Filigrees of light stream through a filthy window. The air inside is stale, redolent of mildew and earth.

"*Regardez*," he says.

As my eyes adjust to the semidarkness, I take in the scene: cracked brown walls, rusting bicycles, pots, pans, burlap sacks of rice labeled PRODUCT OF VIETNAM. At my feet lie two dozen wood-and-metal chests blanketed in dust. Al-Wangari flips the lid of one of them, revealing stacks of old volumes bound in mottled leather. I pick up a book and turn the yellowing pages, gazing at elegant Arabic calligraphy and intricate geometric designs, some leafed in gold. Turquoise and red dyes are still visible inside grooved diamonds and polygons that decorate the cover.

Perusing the volumes, I draw back: the brittle leather has begun to break apart in my hands. Centuries-old pages flutter from broken bindings and crumble into scraps. Some volumes are bloated and misshapen by moisture; others are covered by white or yellow mold. I open a manuscript on astrology, with annotations carefully handwritten in minute letters in the margins: the ink on most pages has blurred into illegibility. "This one is rotten," al-Wangari mutters, setting aside a waterlogged 16th-century Koran. "I am afraid that it is destroyed completely."

In the mid-16th century, Mohammed abu Bakr al-Wangari, an Islamic scholar from the town of Djenné, migrated north to Timbuktu, then a city of perhaps 100,000 and a religious, educational and trading center, and founded the University of Sankoré, a loose affiliation of mosques and private homes that provided subsidized instruction to thousands of students. During the next 30 years, al-Wangari amassed handwritten books on subjects ranging from history to poetry to astronomy, from both Timbuktu and other parts of the Islamic world. After the scholar's death in 1594, the books passed to his seven sons, and subsequently dispersed to an ever-widening cir-

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Writer **JOSHUA HAMMER** *lives in Cape Town, South Africa. Photographer* **ALYSSA BANTA** *is based in Fort Worth, Texas.*

At a fledgling research center (in the village of Ber, see below, once a repository of 15,000 manuscripts dating to the 1400s), scholar Ibrahim Mohammed surveys texts. Here in the desert, dust is the enemy, abrading manuscripts over time.

cle of family members. And there they remained until three years ago, when al-Wangari, 15 generations removed from the original collector, set out to recover his family's treasures. "It's a colossal task," says al-Wangari, 42. Slim and intense, he studied Arabic literature in Fez, Morocco, and later worked as a UNESCO consultant in Dakar, Senegal. "I'm working at this every waking minute, and I'm not even getting paid a franc."

A little later he leads me farther down the alley to a half-finished building, marked by a sign that reads AL-WANGARI LIBRARY RESTORATION PROJECT, where laborers are mortaring concrete-block walls and laying bricks to dry in the sun. We cross a courtyard, enter a gloomy interior and walk past dangling wires, stacks of marble tiles and gaping holes awaiting windows. "This will be the reading room," he tells me, gesturing to a bare cell with a dirt floor. "Over here, the workshop to repair the manuscripts." Then al-Wangari points out the centerpiece of his new creation: a vault reserved for the bones of his ancestor, Mohammed abu Bakr al-Wangari, who lived in the house that once stood on this spot. "He would be happy to know what's happening here," he says.

For centuries, manuscripts such as these remained some of Africa's best-kept secrets. Western explorers who passed through Timbuktu in the early 1800s, some disguised as Muslim pilgrims, made no mention of them. French colonizers carted off a handful to museums and libraries in Paris, but for the most part left the desert empty-handed. Even most Malians have known nothing about the writings, believing that the sole repositories of the region's history and culture were itinerant-musician-entertainers-oral historians known as *griots*. "We have no written history," I was assured in Bamako, Mali's capital, by Toumani Diabate, one of Mali's most famous musicians, who traces his griot lineage back 53 generations.

Lately, however, the manuscripts have begun to trickle out into the world. Local archaeologists are chasing down volumes buried in desert caves and hidden in underground chambers, and archivists are reassembling lost collections in libraries. South Africa's president, Thabo Mbeki, and Harvard professor Henry Louis Gates Jr. have lent their names and prestige to restoration projects. Foreign aca-

MAP: MIKE REAGAN

German explorer Heinrich Barth (below), who came under suspicion as a foreigner in Timbuktu (above, 1829), was threatened with death in 1853. A local sheik, however, decreed that his life be spared: "He is a human being, and he has not made war against us."

demics and book restorers have arrived in Timbuktu, providing expertise, money and materials to rescue the manuscripts before it is too late. Improperly stored for centuries, many of these works have already been ruined. Heat and aridity have made pages brittle, termites have devoured them, dust has caused further damage, and exposure to humidity during the rainy season has made the books vulnerable to mildew, which causes them to rot. "We are in a race against time," says Stephanie Diakité, an American based in Bamako who runs workshops in Timbuktu on book preservation.

The manuscripts paint a portrait of Timbuktu as the Cambridge or Oxford of its day, where from the 1300s to the late 1500s, students came from as far away as the Arabian Peninsula to learn at the feet of masters of law, literature and the sciences. At a time when Europe was emerging from the Middle Ages, African historians were chronicling the rise and fall of Saharan and Sudanese kings, replete with great battles and invasions. Astronomers charted the movement of the stars, physicians provided instructions on nutrition and the therapeutic properties of desert plants, and ethicists debated such issues as polygamy and the smoking of tobacco. Says Tal Tamari, a historian at the National Center for Scientific Research in Paris, who recently visited Timbuktu: "[These discoveries are] going to revolutionize what one thinks about West Africa."

Some scholars believe that the works might even help to bridge the widening gap between the West and the Islamic world. Sixteenth-century Islamic scholars advocate expanding the rights of women, explore methods of conflict resolution and debate how best to incorporate non-Muslims into an Islamic society. One of the later manuscripts discovered, an 1853 epistle by Sheik al-Bakkay al-Kounti, a spiritual leader in Timbuktu, asks the reigning monarch, the Sultan of Masina, to spare the life of German explorer Heinrich Barth. The sultan had ordered Barth's execution because non-Muslims were barred from entering the city, but al-Bakkay argued in an eloquent letter that Islamic law forbade the killing. "He is a human being, and he has not made war against us," al-Bakkay wrote. Barth remained under the protection of al-Bakkay and eventually made it back to Europe unscathed. "The

THE BRIDGEMAN ART LIBRARY; BETTMANN / CORBIS.

Islamic moderates continue to dominate religious thinking in Timbuktu (the city's mosque, above, dating from c. 1325, is a UNESCO World Heritage site). Efforts by Saudi Wahhabi proselytizers to export anti-Western views to Mali have met with little success.

manuscripts show that Islam is a religion of tolerance," says Abdel Kader Haidara, who owns one of the largest private collections of manuscripts in Timbuktu, including the letter from al-Bakkay. Haidara is raising funds to translate some of them into English and French. "We need to change people's minds about Islam," he says. "We need to show them the truth."

THE LAST TIME I'D VISITED TIMBUKTU, in 1995, there were only three ways to get there: a three-day journey upriver by a motorized pirogue, or canoe, from the trading town of Mopti; a chartered plane; or a flight on the notoriously unreliable government airline, Air Mali, mockingly known as Air Maybe. But when I returned last February, at the end of the cool, dry season, to check on the city's cultural revival, I flew from Bamako on a commercial flight operated by a new private airline, Mali Air Express—one of four flights to Timbuktu each week. The Russian-made turboprop, with a South African crew, followed the course of the Niger River, a sinuous strand of silver that wound through a pancake-flat, desolate landscape. After two hours we banked low over flat-roofed, dun-colored buildings a few miles east of the river and touched down at Timbuktu's tarmac airstrip. Outside a tiny terminal, a fleet of four-wheel-drive taxis waited to ferry tourists down a newly constructed asphalt road to town. I climbed into a Toyota Land Cruiser and directed the driver, Baba, a young Tuareg who spoke excellent French and a few words of English, to the Hotel Colombe, one of several hotels that have opened in the past three years to cater to a rapidly expanding tourist trade.

At first glance, little had changed in the decade that I'd been away. The place still felt like the proverbial back of beyond. Under a blazing late winter sun, locals drifted through sandy alleys lined by mud-walled and concrete-block huts, the only shade provided by the thorny branches of acacia trees. The few splashes of color that brightened the otherwise monochromatic landscape came from the fiery red jerseys of a soccer team practicing in a sandy field, the lime green facade of a grocery store and the peacock blue *bubus*, or traditional robes, of the local Tuareg men. The city petered out into a haphazard collection of domed Tuareg tents and piles of trash that goats were feeding on.

Yet Timbuktu's isolation has become a bit less oppressive. Ikatel, a private cellular phone network, came to town two years ago, as their ubiquitous billboards and phone-card booths testify. I noticed a white-robed imam talking emphatically on his Nokia in front of the Djingareyber Mosque, a massive mud fortress built in the 1320s that rises in the town center. Three Internet cafés have opened. Hammering, sawing and bricklaying are going on all over

{ CONTINUED ON PAGE 54 }

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{ CONTINUED FROM PAGE 51 }

town, as new libraries prepare to open to the public. The day I arrived, a delegation of imams from Morocco, several researchers from Paris, a team of preservationists from the University of Oslo and a pair of radio reporters from Germany were on hand to look at manuscripts.

Timbuktu is also no longer immune to the ideological contagions that have plagued the wider world. On the southeast edge of town, Baba pointed out a bright yellow concrete mosque, by far the best constructed new building in town, built by Saudi Wahhabis who have tried, without much success, to export their hard-line brand of Islam to the Sahara. Not far from the Wahhabis' haunt, on the terrace of the Hotel Bouctou, I ran across five clean-cut young U.S. Special Forces troops, dispatched to train the Malian Army in counterterrorism. Joint military operations have become common in the Sahel since an Algerian Islamic terrorist cell, the Salafist Group for Preaching and Combat, seized dozens of European hostages on the border between Algeria and Mali three years ago and held them for six months in the Malian desert.

MOST HISTORIANS BELIEVE that Timbuktu was founded in the 1100s by a Tuareg woman named Bouctou, who ran a rest stop for camel caravans on a tributary of the Niger River. ("Tin Bouctou" means "the well of Bouctou.") The city reached its peak in the early 16th century, during the reign of King Askia Mohammed, who united West Africa in the Songhai Empire and ruled for 35 prosperous years. The *Tariqh al-Sudan*, a history of Timbuktu written in the 17th century, described the city in its heyday as "a refuge of scholarly and righteous folk, a haunt of saints and ascetics, and a meeting place for caravans and boats." In 1509, Mohammed al-Wazzan al-Zayati, a 16-year-old student from Fez, arrived by camel with his uncle, a diplomat, and found a bustling commercial crossroads. Timber, gold and slave traders from Ghana, salt sellers from the Sahara, and Arab scholars and merchants from the Levant mingled in bazaars packed with spices, fabrics and foodstuffs, and conducted transactions with cowrie shells and nuggets of gold. "In the middle of the town there is a temple built of masoned stones and limestone mortar . . . and a large palace where the king stays," al-Zayati wrote in an account published in 1526 under the name Leo Africanus. "There are numerous artisans' workshops, merchants, and weavers of cotton cloths. The cloths of Europe reach Timbuktu, brought by Barbary merchants."

Al-Zayati was astonished by the scholarship that he discovered in Timbuktu. (Despite his encouragement of education, the emperor himself was not known for his open-mindedness. "The king is an inveterate enemy of the Jews," al-Zayati noted. "He does not wish any to live in his town. If he hears it said that a Barbary merchant . . . does business with them, he confiscates his goods.") Al-Zayati was most impressed by the flourishing trade in books that he observed in Timbuktu's markets. Handwritten in classical Arabic, the books were made of linen-based paper purchased from traders who crossed the desert from Morocco and Algeria. Ink and dyes were extracted from desert plants, and covers were made from the skins of goats and sheep. "Many manuscripts . . . are sold," he noted. "Such sales are more profitable than any other goods."

Eighty-two years after al-Zayati's visit, the armies of the Moroccan sultan entered the city, killed scholars who urged resistance and carried off the rest to the royal court in Marrakesh. The forced exodus ended the city's days as a center of scholasticism. (Timbuktu soon faded as a commercial center as well, after slave traders and other merchants from Europe landed in West Africa and set up ocean networks to compete with the desert routes.) For the most part, the volumes of history, poetry, medicine, astronomy and other subjects that were bought and sold by the thousands in Timbuktu's bazaars vanished into the desert. And there they remained, hidden in rusting trunks in musty storage rooms, stashed in mountain caves or buried in holes in the Saharan sands to protect them from conquerors and colonizers, most recently the French, who left in 1960.

In the 1990s, villagers in strife-torn Ber (now calm, below) hid precious volumes.

THE CAMPAIGN TO RESCUE Mali's manuscripts began in 1964, four years after Mali won its independence. That year, UNESCO representatives met in Timbuktu and resolved to create a handful of centers to collect and preserve the region's lost writings. It took another nine years before the government opened the Centre Ahmed Baba, named after a famed Islamic teacher who was carried to exile in Marrakesh in 1591. With funding from the United Nations and several Islamic countries, including Kuwait and Saudi Arabia, the center dispatched staff members into the countryside to forage for lost manuscripts. One collector was Mohammed Haidara, an Islamic scholar and manuscript maker from Bamba, a village midway between Timbuktu and the village of Gao. Haidara helped build a collection of 2,500 volumes. Soon after his death in 1981, the center's director turned to Haidara's son, Abdel Kader, then in his 20s, and asked him to take over his father's job.

Abdel Kader Haidara spent the next decade traveling on foot and by camel throughout Mali, and taking pirogues along the Niger River and its tributaries. "I went looking

for manuscripts in all the villages," he told me. A tall, ebullient man with a Falstaffian goatee and tufts of black curly hair framing a shiny, bald pate, Haidara is widely considered the most important figure in Timbuktu's renaissance. "Everybody knew my father. They all said, 'Ah, you are his son,' but the work was difficult," he said. Many villagers were deeply distrustful of an interloper trying to take away possessions that had been in their families for generations. "People said, 'He's dangerous. What does he want with these manuscripts? Maybe he wants to destroy them. Maybe he wants to bring us a new religion.'" Others drove hard bargains. One village chief demanded that Haidara build a mosque for his village in exchange for his collection of ancient books; after construction was finished, he extracted a renovation for the local *madrasa* (Islamic religious school) and a new house as well. Some chiefs wanted cash, others settled for livestock. But Haidara negotiated hard—he had grown up around ancient manuscripts and had developed a keen sense of each book's worth. "I gave out a lot of cows," he said.

The need to rescue deteriorating treasures (a page from a legal treatise, above) is urgent. Says preservationist Stephanie Diakité: "We are in a race against time."

In 1993, Haidara decided to leave the center and venture out on his own. "I had a lot of my own manuscripts, but my family said it was not permitted to sell them. So I told the Ahmed Baba director, 'I want to create a private library for them,' and he said, 'fine.'" For three years, Haidara searched for financing with no success. Then, in 1997, Henry Louis Gates Jr. stopped in Timbuktu while making a television series about Africa. Haidara showed his manuscripts to the Harvard scholar, who had known little about black Africa's written history. "Gates was moved," Haidara says. "He cried, and he said, 'I'm going to try to help you.'" With Gates' endorsement, Haidara got a grant from the Andrew Mellon Foundation, which allowed him to continue searching for family books and to construct a library to house them. The Bibliothèque Mamma Haidara opened in Timbuktu in 2000; today the collection contains 9,000 volumes.

In 1996 a foundation that Haidara established, Savama-DCI, to encourage others with access to family collections to follow in his footsteps, received a $600,000 grant from the Ford Foundation to construct two new libraries in Timbuktu, the Bibliothèque al-Wangari and the Bibliothèque Allimam Ben Essayouti. The funds will also allow Haidara to renovate his own library and to purchase computers to digitize the works, hire experts to restore damaged books and give instruction to local archivists. Haidara has become the driving force behind manuscript preservation in the Sahara. "We want people to be able to touch and read these manuscripts," he told me. "We want to make them accessible. But first, they must be protected."

The work is gaining momentum. After meeting with Haidara, I visited the Centre Ahmed Baba, a handsome complex of stone buildings with Moorish archways set around a sand courtyard planted with date palms and desert acacias. Director Mohamed Gallah Dicko escorted me into the atelier. Fourteen workers were making storage boxes and carefully wrapping crumbling manuscript pages in transparent Japanese paper called *kitikata*. "This will protect them for at least 100 years," he said. A total of 6,538 manuscripts at the center have been "dedusted," wrapped in acid-free paper

CENTRE AHMED BABA

Archivists at Timbuktu's Ahmed Baba Center (digitizing the collections, above) face a daunting workload: holdings are increasing by the day. Says center director Mohamed Gallah Dicko: "There are hundreds of thousands of manuscripts still out there."

and placed in boxes, Gallah Dicko said; there are another 19,000 to go. The workers have flown to workshops in Cape Town and Pretoria paid for by South Africa's National Archive, part of a program that the South African government initiated after President Mbeki visited Timbuktu in 2002. In an airless room across the courtyard, a dozen archivists huddle over Epson and Canon scanners, creating digital images of the works, page by page. The manuscript collection is growing so fast that the staff can't keep up. "We're expanding our search to the northwest and the northeast," Gallah Dicko tells me. "There are hundreds of thousands of manuscripts still out there."

Yet placing the books in Timbuktu's libraries under the care of experts doesn't guarantee their protection. Seven years ago, heavy rains caused the Niger to overflow its banks. The worst flood in decades swept through Timbuktu, destroying 200 houses and many valuable works. Only rapid salvaging prevented the ruin of 7,025 manuscripts at the Spanish-funded Bibliothèque Fondo Kati, whose treasures include a priceless illuminated Koran made in Ceuta, Andalusia, in 1198. "We put bags of sand around the house, and we saved it from collapse," I was told by the library's creator, Ismael Diadie Haidara (no relation to Abdel Kader Haidara), whose paternal ancestor fled Toledo in 1468 and brought hundreds of manuscripts, including the Ceuta Koran, to Africa. "We could have lost everything."

TWO DAYS AFTER OUR MEETING, Abdel Kader Haidara arranges for me to travel to the Tuareg village of Ber, 40 miles east of Timbuktu. It is one of a handful of remote Saharan settlements where Islamic scholars and others, under Haidara's tutelage, have begun building their own manuscript collections. The sun is just rising when we depart Timbuktu, and a chill wind whips through the open windows of our battered Land Cruiser. Baba steers the vehicle over an undulating sand track, passing encampments of nomads who have pitched tents on the city's outskirts to sell jewelry and offer camel rides to Western tourists. Then we're in the heart of the Sahara, fishtailing past dunes and scraggly acacias.

Fida ag Mohammed, the collection's curator, fiddles with a set of prayer beads in the rear seat. A gaunt man in his late 40s or early 50s with wispy sideburns that blow outward in the breeze, Mohammed was initially reluctant to take me, a stranger, to Ber. But Haidara reassured him that I was a journalist, not a spy, and he finally consented. "There are evil people out there who want to steal from us our traditions, our history," he explains as Baba swerves to avoid a speeding pickup truck packed with blue-robed, white-scarved Tuaregs. "We have to be careful."

After two hours we reach Ber, a shadeless collection of mud-brick huts and tents scattered across a saddle between two low desert ridges. There is a veterinary clinic, a health cen-

In Timbuktu, at a Koranic school, students (many of whom are homeless children) copy out passages from sacred texts. Representing the next generation of Islamic scholars, they are taking part in a cultural tradition that stretches back hundreds of years.

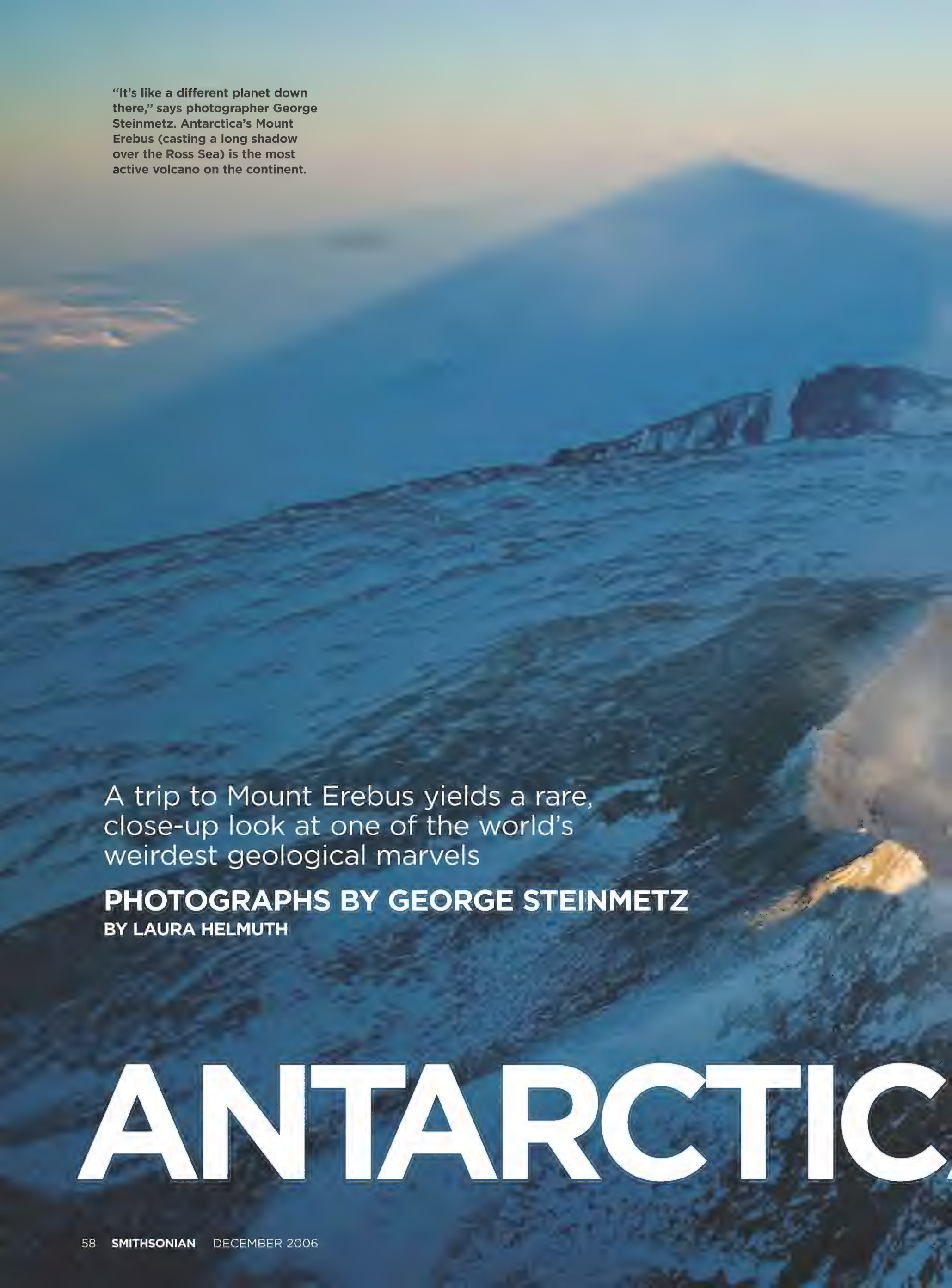
ter and a primary school, but few other signs of permanence. Mohammed leads us to his two-room house, where we sit on mats on the dirt floor. He disappears into his kitchen and returns with a pot filled with something dark and smelly: minced gazelle, Baba whispers. Nervously, I taste a few spoonfuls of the meat, finding it gamy and gristly, and decline the warm camel milk that Mohammed offers as a *digestif*.

Ber once had 15,000 manuscripts dating as far back as the 15th century, the men tell me. Most of these were in the possession of village *marabouts*, or "knowledge men," often the only individuals who know how to read and write. But in the early 1990s, after a period of droughts and neglect by the government, the Tuaregs launched a violent rebellion. Tuareg villages were attacked, looted and sometimes burned by government troops and mercenaries from other desert tribes. (Ber was spared.) Before the Tuaregs and the government concluded a peace deal in 1996, Ber's inhabitants dispersed all but a few hundred manuscripts to settlements deep in the Sahara, or buried them in the sand. It was a modern-day version of a story that has played out in Mali for centuries, a story of war, depredation and loss. "I'm starting to locate the manuscripts again," Mohammed tells me. "But it takes time."

We cross a sandy field and enter a tin-roofed shack, Mohammed's "Centre de Recherche." Mohammed opens a trunk at my feet and begins to take out dozens of volumes, the remains of Ber's original collection, along with a few he has recovered. He touches them reverently, delicately. "Dust is the enemy of these manuscripts," he murmurs, shaking his head. "Dust eats away at them and destroys them over time." I pick up a miniature Koran from the 15th century, thumb through it and stare in amazement at an illustration of the Great Mosque of Medina. It's the only drawing, besides geometrical patterns, that I've seen in four days of looking at manuscripts: a minutely rendered, pen-and-ink depiction by an anonymous artist of Saudi Arabia's stone-walled fortress, two pencil-thin minarets rising over the central golden dome, date palm trees at the fringes of the mosque and desert mountains in the distance. "You are one of the first outsiders to see this," he tells me.

After an hour inspecting the works, Mohammed brings out a guest register, a thin, grade-school composition book, and asks me to sign it. A total of six visitors have registered since 2002, including a former U.S. ambassador to Mali. "The next time you come to Ber, I'll take you into the desert for a week," Mohammed tells me before we part. "I'll show you where they buried the books, deep in the ground, so that nobody can find them." They are still out there, thousands of them, guarded by fearful villagers, disintegrating slowly in the heat and dust. But thanks to Mohammed, Haidara, al-Wangari and others like them, the desert has at last begun to surrender its secrets.

Visit Smithsonian.com for more photographs of Timbuktu.



"It's like a different planet down there," says photographer George Steinmetz. Antarctica's Mount Erebus (casting a long shadow over the Ross Sea) is the most active volcano on the continent.

A trip to Mount Erebus yields a rare, close-up look at one of the world's weirdest geological marvels

PHOTOGRAPHS BY GEORGE STEINMETZ

BY LAURA HELMUTH

ANTARCTIC

A ERUPTS!

"I mostly go, quite frankly, for fun," says Bill McIntosh (below, left, with a visitor in an ice cave carved by heat from Erebus).

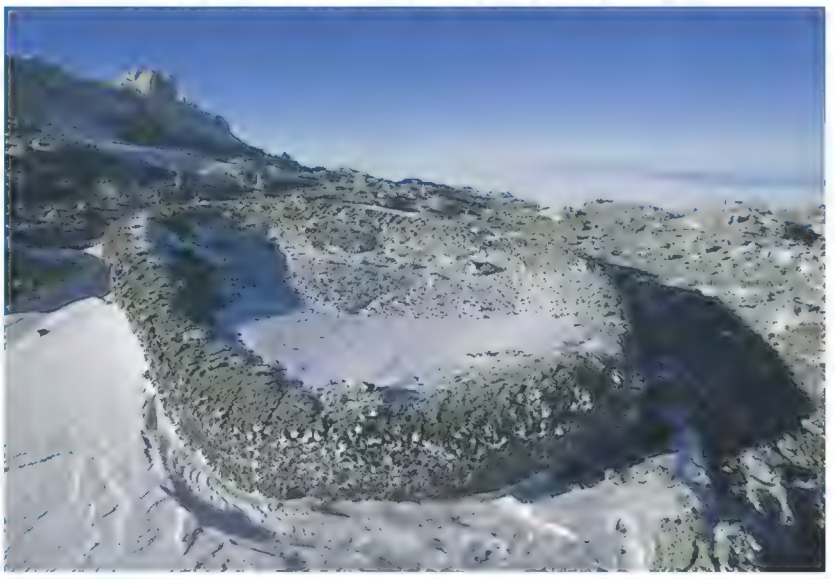
GEORGE STEINMETZ was drawn to Mount Erebus, in Antarctica, by the ice. The volcano constantly sputters hot gas and lava, sculpting surreal caves and towers that the photographer had read about and was eager to see. And though he'd heard that reaching the 12,500-foot summit would be an ordeal, he wasn't prepared for the scorching lava bombs that Erebus hurled at him.

Steinmetz, 49, specializes in photographing remote or harsh places. You're almost as likely to find him in the Sahara as at his home in Glen Ridge, New Jersey. Thanks to his expedition to Erebus last year, funded by the National Science Foundation, he's one of the few photojournalists to document up close one of the world's least-seen geological marvels. Most of his photographs were taken during the soft twilight that passes for night during the polar summer.

The flanks of Erebus are spiked with ice towers, hundreds of them, called fumaroles. Gas and heat seeping through the side of the volcano melt the snowpack above, carving out a cave. Steam escaping from the cave freezes as soon as it hits the air, building chimneys as high as 60 feet.

The scientists who work on Mount Erebus say that its ice caves are every bit as much fun to explore as you might expect. But the scientists are more interested in the volcano's crater, with its great pool of lava—one of the few of its

With summer temperatures on Erebus reaching -5 degrees F, scientists head for the summit (below, top, McIntosh clears ice off a camera at the crater rim), dodging lava bombs (middle) that, when sampled, yield clues to the volcano's fiery core; McMurdo Station (bottom) is home base.



kind. Most volcanoes have a deep central chamber of molten rock, but it's typically capped by cooled, solid rock that makes the hot magma inaccessible. On Mount Erebus, the churning magma is exposed at the top of the volcano, in a roiling 1,700-degree Fahrenheit lake perhaps miles deep. "The lava lake gives us a window into the guts of the volcano," says Philip Kyle, a volcanologist at the New Mexico Institute of Mining and Technology.

Mount Erebus looms over the United States' main research base in Antarctica, McMurdo Station, on Ross Island. Most of the year scientists monitor the volcano remotely, gathering data from seismometers, tilt meters, GPS signals, video cameras and microphones. They helicopter the 20 miles from McMurdo to Erebus at the beginning of the six-week field season, which lasts from mid-November to early January, when the temperature on the mountain can reach a balmy -5 degrees. Still, winds can whip at 100 miles per hour, and blizzards and whiteouts are common. The researchers often get stuck in their research camp—two 16-by 24-foot huts at 11,400 feet elevation—waiting for the weather to clear. Out of the eight days that Steinmetz spent on the volcano, he was able to work for only two.

On their first clear day, Steinmetz and Bill McIntosh, also of New Mexico Tech, rode snowmobiles up to the crater's rim. As they headed back down, Mount Erebus spattered lava over the area they'd just explored. "It looked

Seemingly dreamed up by Dr. Seuss, Mount Erebus' improbable ice towers form around steaming vents, growing up to 60 feet before collapsing.

like shotgun blasts," says Steinmetz. "There were puffs of hot steam where the lava bombs hit." Kyle, who has been monitoring the volcano for more than 30 years, says it had recently broken a two-year quiet spell. Mount Erebus had started acting up in early 2005, and when scientists arrived it was erupting several times a day, each time ejecting 50 or so lava bombs. The largest are about ten feet wide—great blobs of bubbly lava that collapse like failed soufflés when they land, some almost a mile away.

Erebus and the rest of the continent will come under more scrutiny than usual in 2007, as scientists head to the ends of the earth for the fourth International Polar Year since 1882. They'll try out new monitoring techniques, study how Antarctica and the Arctic influence worldwide weather, and probe what kind of life could exist in the extreme cold and winter-long dark of the poles.

Mount Erebus' ice caves are among the most promising places for undiscovered life in Antarctica. Though they grow or shrink depending on how much heat the volcano emits, inside they maintain a temperature of about 32 degrees. Says McIntosh: "The caves are wonderful because they're so warm."

GEORGE STEINMETZ's *photographs of Peruvian pyramids and Mexican cave paintings have appeared in* SMITHSONIAN. *Senior editor* **LAURA HELMUTH** *specializes in science.*

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When self-taught archaeologists dug up an 1850s steamboat, they brought to light a slice of American life

BY FERGUS M. BORDEWICH

Pay Dirt

ON A STEAMY July day in 1987, David Hawley walked through rows of ripening Kansas corn, listening to chirps coming from a black box cradled in his hands. Somewhere below the cornfield, Hawley believed, lay the steamboat *Arabia*, which had struck a submerged tree or snag and, on September 5, 1856, vanished beneath the muddy waters of the Missouri River. As he pushed through the stalks with his magnetometer, which measures the intensity of the magnetic field beneath the earth's surface, Hawley figured he was about in the middle of what once had been the river's channel.

After his son David located the *Arabia* (in a 1991 painting) under 30 feet of mud, Bob Hawley (above) dug in.

PACKET
ARABIA

"I didn't know where I was going, and I couldn't see very well through the corn," Hawley, 54, recalls. He had walked the field for the better part of the afternoon when the chirping suddenly accelerated. "I got real excited. It was like a bull's-eye. I knew I was there. I took a few more steps. It kept on jumping. I felt like a kid in a candy store. I said to myself, 'I've got it! This is one big fish, and we're going to reel you in!'"

Inspired by tales of lost consignments of gold and valuable cargoes of whiskey, Hawley, his father, Bob, and younger brother, Greg, had searched for years for wrecks of sunken Missouri River steamboats, nearly 300 of which have been documented. By 1987, they had little more than old timbers to show for their efforts and, in one disappointing instance, a cargo of waterlogged salt pork. The Hawleys considered themselves treasure hunters who would sell what they found for whatever profit they could make. But the steamboat David Hawley stumbled onto that July afternoon would transform them into archaeologists, and in turn, preservationists, curators and fundraisers for a new museum. It would also enlarge historians' understanding of the American frontier and the era when the paddle wheel was queen of the Western waters.

David Hawley (above) is convinced that another steamboat lies somewhere beneath his feet: "I'm like an old-time riverboat gambler," he says. "My luck's going to hit."

From their research, the Hawleys knew that *Arabia* had been launched in 1853 on the Monongahela River in Pennsylvania; newspapers of the time described the boat as a "handsome and staunch packet . . . furnished throughout with the latest accommodations and improvements for the comforts of the passengers and conveyance of freight." They knew, too, that *Arabia* carried Mormon settlers on their way to Utah and soldiers to forts in distant Montana. *Arabia* had even played a role in the battle for "Bleeding Kansas," when pro-slavery men discovered crates of rifles destined for abolitionists in the ship's hold and nearly lynched the passengers who had brought them aboard. The Hawleys had also come across an eyewitness account of *Arabia*'s last moments. "There was a wild scene on board," recalled a survivor named Abel Kirk. "The boat went down till the water came over the deck, and the boat keeled over on one side. The chairs and stools were tumbled about and many of the children nearly fell into the water." Amazingly, considering that *Arabia* sank in less than ten minutes, all 130 passengers, and the crew, survived.

BOB HAWLEY, 77, calls his clan "just a run-of-the-mill blue-collar family," one that owned a refrigerator business in Independence, Missouri. Hawley's ancestors went West to join up with the first settlers in Utah. "My great-great-grandfather was told he had to get himself another wife," says Bob, "but he just couldn't make himself do it, so he left Utah in the dead of night." From his father, Gerry, a blacksmith, Bob inherited mechanical ingenuity and a stubborn perfectionism that would serve the Hawleys well in their quest to salvage *Arabia*.

By the time David had located the vessel, the Hawley men had already formed a partnership with an old friend, Jerry Mackey, who owned several local Hi-Boy restaurants, and with Kansas contractor Dave Luttrell. Having obtained permission to excavate from the farmer who owned the land, they now brought in diesel generators they had bought from a family in Missouri, pipe from Oklahoma and a secondhand crane they floated in by barge. (In 1988 the river was about half a mile from the site.)

The Hawleys began digging in mid-November, working 12- to 14-hour days, seven days a week. On dry days, sand worked its way into their ears, noses and mouths. During wet weather, the Hawleys fought mudslides and floods that surged unpredictably out of the spongy, soggy soil. To remove water from the site faster than it seeped in, Bob designed a system of pumps, each displacing 1,000 gallons per minute. The pumps had to be dismantled to prevent them from freezing at night, then laboriously reassembled the next morning.

Luttrell's bulldozers cut into what had once been the Missouri's channel until they were nearly 30 feet below ground level. On November 30, after 17 days of digging, a power shovel scraped across a piece of wood. It proved to be *Arabia*'s larboard paddle wheel. A few days later, the top of a barrel appeared in the ooze. Jerry Mackey pried off the barrel's lid, and Bob Hawley reached down into mud and

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Writer **FERGUS M. BORDEWICH** *is the author of* Bound for Canaan, *a history of the underground railroad published last year.*

JAMES SCHNEPF, PG 64,65 GARY R. LUCY GALLERY, WASHINGTON, MISSOURI; PG 64 DAVID HAWLEY.

The excavation was dangerous: the Hawleys and their crew worked seven days a week, fighting mudslides and water surging out of saturated soil, to dig a 200- by 300-foot pit.

DAVID HAWLEY

pulled out an assortment of cups and dishes—exquisite Wedgwood china. Bob Hawley ran to his car phone and called his wife, Florence. "Come on down here!" he shouted.

"I'm cooking chili," she protested.

"Forget the chili!" Bob bellowed. "We found it!"

AWARE THAT EXPOSURE TO OXYGEN would quickly destroy fabric and metal alike, the Hawleys stored the china, clothing, tools and thousands of other objects they removed from *Arabia* (see sidebar, p. 69) in commercial freezers at Mackey's restaurants. Wooden artifacts, including timbers, needed to be stored in water to prevent them from shrinking and cracking. For this, the Hawleys rented huge tanks. (Preservation experts told them to stabilize metal with tannic acid, and store organic materials in a solution of polyethylene glycol.)

Bob and Florence Hawleys' suburban house soon took on the look of a bizarre 19th-century general store. Boots soaked in Tupperware bowls. Tin coffeepots and cups hung from backyard trees. Millions of beads filled bowls all over the kitchen. Florence sewed coats, shirts and shoes back together, blocked hats and loosened impacted mud from beads. "Every time I walked by one of those bowls of beads, I'd slosh it, until little by little they gradually separated from the mud," she recalls.

"I was taken aback when I saw all these items," Bob Keckeisen, director of the Kansas State Historical Society Museum, in Topeka, told me. "It really challenged our idea of what life was like on the frontier just two years after Kansas became a territory. It's a real surprise that such goods were available. They show us that settling and town building were happening all at once, and that people wanted nice things and some could afford them." The variety of goods also challenge the idea that the West was primarily a 'safety valve' for people who had run out of options in the East. Adds Keckeisen: "The settlers who were ordering these things were middle-class people, who bought nice goods as soon as they could."

STEAMBOATING ON WESTERN RIVERS began in 1811, just four years after Robert Fulton's steam-driven *Clermont* first chugged up the Hudson River. By the mid-

1850s, some 60 steamboats were plying the Missouri alone, from the levees of St. Louis to remote Army posts nearly 2,000 miles away. "The river was the I-70 of its day," says Kathy Borgman, executive director of the Friends of Arrow Rock, a local preservation group in Arrow Rock, Missouri, a former river port between St. Louis and Kansas City. "The whole world came through on the riverboats." Indeed, steamboats were floating microcosms of mid-19th-century America, where traders, gamblers and speculators of every stripe rubbed shoulders with Missouri slave owners, Mormons and mountain men. Free Staters en route to Kansas mingled with Indians on their way home from Washington, D.C., emigrants bound for Oregon or the California gold fields, Yankee businessmen, and bullwhackers who drove the wagon trains that crossed the plains.

Greg Hawley (at the Arabia Steamboat Museum in 2005) says that soon after he and his family unearthed the vessel, they realized "we had a national treasure on our hands."

Compared with navigating the broad Mississippi, the Missouri was notoriously difficult. The river was a kind of giant dodgem course, "whose alluvial banks," wrote Mark Twain, himself an apprentice pilot in the 1850s, "cave and change constantly, whose snags are always hunting up new quarters, whose sandbars are never at rest, whose channels are forever dodging and shirking, and whose obstructions must be confronted in all nights and all weathers without the aid of a single lighthouse or a single buoy."

"It is the hungriest river ever created," one observer said. "It is eating all the time—eating yellow clay banks and cornfields, eighty acres at a mouthful; winding up its banquet with a truck garden and picking its teeth with the timbers of a big red barn." During dry spells, when the river shrank to the depth of a pond, steamboat captains had to order a pair of stout timbers, or spars, lowered point-down into the sand at the front of the boat, then driven forward by the paddle wheel. "It was like attempting to walk on stilts, or more like jumping onto stilts," says Robert Mullen, the collections manager at the Missouri Historical Society, in St. Louis. "It would lift the boat a few inches just to advance it a few inches."

But the steamboats were also magical apparitions, floating palaces with glamorous interiors. Images of sunbursts and famous battles embellished paddle-wheel boxes; the tops of smokestacks bore cutout silhouettes of exotic plumes or ferns; colorful pennants snapped on the wheelhouse. When a boat neared shore, a calliope struck up a polka or the Virginia reel, its strains floating across the water like a promise of deliverance. Staterooms finished in mahogany were appointed with silk draperies and rich carpets. Entering the saloon of a riverboat, wrote Twain, was "like gazing through a splendid tunnel" which "glittered with no end of prism-fringed chandeliers." The cuisine was equally impressive, although the menu for a typical buffet in 1852 may appeal rather less to the modern palate: beef, veal, pork, liver sauce, venison, boiled tongue, plus "side dishes" of mutton, pork ragout, beef heart and "calf head à la mode."

Steamboats could be hugely profitable; a paddle wheeler that cost about $15,000 to build could earn as much as $80,000 in a single journey. But their lives tended to be short; a Missouri steamboat rarely lasted more than three years. Boats caught fire, blew up and sank routinely. Between 1830 and 1840 alone, an estimated 1,000 lives were lost on Western rivers.

By far the greatest danger, however, was posed by snags, which accounted for almost two out of three of the steamboats lost on the Missouri. Twain describes the scene: "The whole vast face of the stream was black with drifting dead logs, broken boughs, and great trees that had caved in and been washed away. It required the nicest steering to pick one's way through this rushing raft, even in the daytime, when crossing from point to point; and at night the difficulty was mightily increased; every now and then a huge log, lying deep in the water, would suddenly appear right under our bows, coming head-on; no use to try to avoid it then; we could only stop the engines, and one wheel would walk over that log from one end to the other, keeping up a thundering racket and careening the boat in a way that was very uncomfortable to passengers. Now and then we would hit one of these sunken logs a rattling bang, dead in the center, with a full head of steam, and it would stun the boat as if she had hit a continent."

THE RIVER NEARLY CLAIMED the Hawleys as well. One morning during excavation of *Arabia*, Bob and Greg were working knee-deep in mud when a sudden rush of groundwater overtook them. Struggling to free themselves from the glutinous muck, they were trapped in the rising waters. Only a providential occurrence prevented tragedy: collaps-

JAMES SCHNEPF

Time Capsule

A riverboat's telltale contents included 133-year-old pickles. Want one?

The Hawleys discovered neither gold nor whiskey in the hold of *Arabia*. But as they broke open the boat's barrels and crates, they were astonished by the range of what they did uncover: bottles of wine, castor oil and "Dr. Hostetter's Stomach Bitters," lice combs and toothbrushes, wrenches, gimlets, mattocks and saws, woolen socks, overcoats and top hats, window glass, bells, inkwells and school slates. They found bedsprings, coffin screws, wagon wheels, brass hinges, lightning rod insulators, self-sealing fruit jars, glassware and chinaware by the barrelful. There were India-rubber overshoes (the earliest yet found), whale-oil lamps, cuspidors, syrup jugs with lidded spouts, door keys in a dozen sizes, an abundance of locks, safety matches and heaps of French buttons in rainbow hues. The discoveries went on and on: bullwhips, doorknobs, spectacles, pepper mills, spring-operated clothespins of startlingly modern design, enough printer's type to start a newspaper, even two prefabricated houses. A significant portion of the cargo consisted of trade goods intended for Native Americans: five-million glass beads imported from Italy and Bohemia, clay pipes, vermilion war paint, the thimbles that Indian women favored as ornaments, to be sewn on clothing.

There was even a case of brandied cherries from France, as well as intact bottles of apple, gooseberry and blueberry pie fillings from Baltimore. Jars of skin cream still bore the scent of coconuts, and flasks of perfume exuded essence of rose. Less appealing were cans of sardines, whose pungent aroma, the Hawleys decided, had definitely not improved over 133 years. The Hawleys even came across a jar of pickles; no sooner had they unearthed it than fellow excavator Jerry Mackey passed it around. But there were no takers. "Well, I'm starving," he said, reaching into the bottle, lifting out a pickle and biting off a chunk. The others held their breath. "That's one very good pickle," he announced.

The hunt for buried treasure soon turned into something else. "We began to care about the people all these things had belonged to," David says. "We kept asking ourselves, 'Who *were* these people? What happened to them?'" The "personal boxes" touched them most. One contained two seashells, seven marbles and a tin toy—a child's long-lost treasures. In another, they found a silver cruet set, nutmeg grater and bottle of peppercorns. And in another, carpenter's tools, so well-crafted that scarcely any silt had penetrated them. "That one was special to me," says Bob. "That man had made that box himself, I just know it." *—F.M.B.*

Personal Tool Box
The carpenter who bought or made these tools suffered a great personal loss when the Arabia sank. He was left on the frontier without the tools to practice his craft.

Clockwise from above: Jar of pickles, whale oil lamps, carpenter's toolbox, calico buttons, Davenport ironstone dishes, child's doll.

JAMES SCHNEPF (2); DAVID HAWLEY (3)

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ing sand sealed the fissure that had opened. Bob managed to escape just as the water reached his chest. "A short man would have died down there," Greg joked afterward.

On January 24, 1989, the Hawleys uncovered a jagged stump still lodged below *Arabia*'s waterline—obviously the instrument of her demise. Today that otherwise nondescript snag is but one of hundreds of thousands of salvaged items on display in the Arabia Steamboat Museum, which opened on November 13, 1991, near the landing in Kansas City, Missouri, from which the vessel departed in 1856. The artifacts themselves converted the Hawleys from treasure hunters into historians. "We fell in love with the story of the *Arabia*," says 49-year-old Greg Hawley. "When we first broke ground, we didn't realize that it would turn out to be the greatest treasure of all." Soon, he says, "We realized that we had a national treasure on our hands. Starting a museum was the only logical step." The museum, whose state-of-the-art preservation laboratory processes some 700 objects from *Arabia* each year, attracts some 200,000 visitors annually. "It would have been easy for the Hawleys to break up that collection, but they didn't," says the Kansas State Historical Society's Bob Keckeisen. "They must be commended for seeing the greater significance in this collection."

A massive snag (an eight-foot fragment at the Steamboat Museum) claimed *Arabia* in 1856. Submerged logs, Mark Twain once wrote, could "stun the boat as if she had hit a continent."

STEAMBOATS PLYING THEIR TRADE are long gone from the waters of the Missouri. The Civil War, the collapse of the plantation economy and the coming of the cross-continental railroad spelled the end of river trade. A handful of steamboats continued to operate into the 20th century (and a few today have survived as tourist vessels), but the glory years would never return. Once-bustling landings have been overtaken by tangled thickets and woodland. Even the river itself has been tamed—by levees, dredging and channel reconfigurations that have stranded some former ports far inland. Yet the great, gray-green river still flows, smooth and wide beneath the wooded bluffs. And sometimes on a summer afternoon, it is still possible to see boys squatting amid the driftwood, old-fashioned fishing rods in hand, like a detail from a painting by George Caleb Bingham—a tantalizing glimpse of a time when Americans were filled with unbridled curiosity about the new continent, and a great white floating palace might at any moment come steaming around the next bend.

JAMES SCHNEPF

Rembrandt at 400

Astonishing brushwork, wrinkles-and-all honesty and deep compassion only begin to hint at the reasons for his enduring genius

BY STEPHANIE DICKEY

HAD YOU TRAVELED THROUGH ANY MAJOR CITY in the Netherlands this year, you would likely have met the piercing gaze of a rather startling face. The wild-haired, wide-eyed character (below) who greeted you from street signs, store windows, magazine covers and chocolate boxes is Rembrandt van Rijn (1606-69), master painter of the Dutch Golden Age. Rembrandt's incomparable art has always been a major selling point for Dutch tourism, but his self-portrait was everywhere in 2006 because Hollanders were celebrating the 400th birthday of their nation's most famous artist. In fact, Rembrandt 400, a yearlong national event under the patronage of Queen Beatrix, touched off a worldwide celebration involving museums and cultural institutions from Krakow to Melbourne. Among American institutions taking part is the National Gallery of Art in Washington, D.C., where "Strokes of Genius: Rembrandt's Prints and Drawings" will be on view through March 18, 2007 (see sidebar, p. 76).

All this attention reflects our enduring fascination with an artist whose works remain as moving and meaningful today as they were four centuries ago. Rembrandt is appreciated both for his expressive technique and his ability to capture the emotional heart of any character or story. His subject matter ranges from the biblical past to the people and places around him, but the central motif of his art—and a major reason his work continues to speak to us centuries after his death—is the human figure, rendered with sensitivity both to the telling imperfections of surface appearance and to the turbulence of the spirit within.

There is little doubt that Rembrandt would have approved of the current use of his own distinctive face as a marketing tool. He painted, etched and drew some 70 self-portraits, more than any other well-known artist of his time. By making his face the centerpiece of his art, he engaged in a uniquely personal means of self-marketing. Dressed in costume or assuming provocative poses, he played roles ranging from beggar and prodigal son to courtier and Oriental potentate. In small prints from his early years, he mugged

PIERPONT MORGAN LIBRARY / ART RESOURCE, NY; P. 73: THE ROYAL COLLECTION © 2006, HER MAJESTY QUEEN ELIZABETH II

After moving to Amsterdam in the early 1630s, Rembrandt (opposite, at 24 in a 1630 self-portrait) became the most sought-after portraitist in the city. In his *Portrait of Agatha Bas* (1641), the subject's direct gaze and hand resting on the window frame create a sense of immediacy and presence, as if she were about to walk straight through the frame.

in a mirror and sketched the results to teach himself the art of depicting emotion. Later in life, in closely observed paintings such as his warts-and-all *Self-Portrait* of 1659 (see Table of Contents, p. 3), he unflinchingly recorded the marks of time and experience. These works found their way into collections all over Europe, helping to make Rembrandt the most widely known Dutch artist of the 17th century.

Rembrandt van Rijn was born on July 15, 1606, in Leiden, the ninth child of miller Harmen Gerritszoon van Rijn and his wife, Neeltgen van Zuytbrouck. The family operated a grain mill on the Rhine River, which bordered the city. They were prosperous, working-class people, and their children would have been expected to join the mill business, as several of Rembrandt's siblings did, or take up a trade. Rembrandt must have shown some special promise, for his parents enrolled him in the Latin School, where he was introduced to classical languages and literature. Such an education should have led to the ministry or public service, but according to 17th-century Leiden historian Jan Orlers, Rembrandt was more interested in doodling than studying, and his parents, perhaps yielding to the inevitable, let him train with a local painter and then sent him to study for six months with an artist in Amsterdam.

Half an hour's train ride from Amsterdam (or a few hours by foot, horse or boat in Rembrandt's day), Leiden today is dominated by its university, which was founded in 1575. In the 17th century, the city owed much of its prosperity to the textile trade. The Municipal Museum De Lakenhal occupies a building that was once a guildhall, where governors and assayers of the cloth industry held their meetings. Several major exhibitions took place there in 2006, including a survey of Rembrandt's landscapes. While some of the paintings in that exhibition depict the countryside near his home, others are pure fantasy. In *The Mill*, for instance, an imposing windmill perches atop a rugged cliff distinctly unlike the flat terrain of Holland. Another exhibition, "Rembrandt's Mother, Myth or Reality," focused on two elderly figures who appear repeatedly in Rembrandt's earliest works. Nineteenth-century scholars, eager to romanticize the artist's life, were quick to identi-

Rembrandt painted the meticulously detailed *Tobit and Anna* (left), for which his parents are thought to have posed, when he was just 20; it is one of his earliest works. He finished the portrait of his wife, *Saskia in a Red Hat* (right), in 1642, after her death.

RIJKSMUSEUM, AMSTERDAM / ART RESOURCE, NY; GEMAELDEGALERIE ALTE MEISTER, KASSEL / BRIDGEMAN ART LIBRARY

STEPHANIE DICKEY *teaches art history at Queen's University in Kingston, Ontario, and is the author of three books on Rembrandt.*

fy them as Rembrandt's mother and father, while studies of younger figures were assumed to represent his brothers and sisters. Although modern scholars are more skeptical (there are no documents verifying these identifications), it makes sense that family members would be the most available—and affordable—models for an artist just starting out.

The signature style of the early Rembrandt school, based on precise observation from life combined with exotic historical costuming, can be traced to works such as Rembrandt's *Tobit and Anna* (1626), opposite, for which his mother and father may have modeled. In such small, meticulous paintings, we catch a glimpse of the young artist carefully training his eye, while developing a fascination with old age that would resurface throughout his career.

By the time he reached his mid-20s, Rembrandt was already gaining international attention. While most of his Dutch contemporaries sold their work locally, his paintings and prints were being collected not only in Holland but in Italy, France and elsewhere. Around 1630, King Charles I of England received three paintings by Rembrandt as a gift, including a self-portrait and a painting that is thought to be of the artist's mother. In search of wider opportunities than his hometown could offer, Rembrandt moved in the early 1630s to Amsterdam, a city of about 125,000 inhabitants and then, as now, the cultural and commercial hub of the Netherlands.

Rembrandt's Holland was unique in Europe: a republic led by citizens, not a monarchy, with a booming trade economy in which hard work and entrepreneurship counted more than a noble title. It was a place where religious diversity was tolerated and where urban, middle-class taste dominated cultural life. Amsterdam was the center of a lively art market, and as soon as Rembrandt arrived there, a business partnership with Hendrick van Uylenburgh, a prominent art dealer, brought the artist some of his first portrait commissions—a foot in the door to patronage from Amsterdam's wealthiest citizens.

With van Uylenburgh's help, Rembrandt quickly became the most sought-after portraitist in Amsterdam. His brilliant *Portrait of Agatha Bas* (p. 73), painted in 1641, shows why. The 30-year-old Agatha, a wealthy burgomaster's daughter and wife of one of van Uylenburgh's investors, regards us with a

{ CONTINUED ON PAGE 78 }

Rembrandt's son, Titus, would have been about 14 when he posed for *Titus at His Desk* (left) in 1655. He later became his father's agent. Hendrickje Stoffels (right, in a 1660 portrait) was the artist's mistress from about 1649 until her death at 37 in 1663.

MUSEUM BOIJMANS VAN BEUNINGEN, ROTTERDAM; GIFT OF ARCHER M. HUNTINGTON, IN MEMORY OF HIS FATHER, COLLIS POTTER HUNTINGTON, 1926 / METROPOLITAN MUSEUM OF ART

"An Almost Mystical Feeling"

Although best known as a painter, Rembrandt was equally gifted as a draftsman and printmaker. Because works on paper exist in far greater numbers than his paintings, a dozen museums around the world were able to build exhibitions this year from their holdings of graphic art. But none has proved more exciting or informative than "Strokes of Genius: Rembrandt's Prints and Drawings," organized by Andrew Robison, senior curator of prints and drawings at the National Gallery of Art in Washington, D.C. Robison set out to make the exhibition a lesson in connoisseurship as well as a visual delight, arranging the display of 182 works in sections that explore Rembrandt's diverse subject matter and innovative techniques.

In studies from life, like the red chalk *Seated Old Man* (below), Rembrandt observed the world around him, while in compositional sketches such as *Joseph Recounting His Dreams* (a scene from Genesis), he planned ideas for more finished works. Landscape drawings, such as *View over the Amstel from the Rampart* (opposite), record the watery terrain near his home with such accuracy that many features can still be identified.

The art of printmaking in Europe was about two centuries old when Rembrandt began his career as an etcher, and he managed to push the medium in a multitude of new ways. Long before photography, prints served an important documentary function, and most were crafted for legible content as much as aesthetic appeal. Rembrandt, however, belonged to a select group of painters who drew on the etching plate with all the expressive freedom of a sketch on paper. Etching, in which lines are drawn into a coating, or "ground," on a copperplate, then bitten into the metal by a solution of acid, is easier to master than engraving, in which lines must be carved directly into the metal. Etching thus allows a more spontaneous effect, which Rembrandt exploited thoroughly.

"What is distinctive about Rembrandt as a printmaker," says Robison, "is that he used all the available resources." He printed on papers of varying tints and textures. He combined etching with other techniques, such as engraving and drypoint. He worked and reworked his designs, adding or subtracting details and putting the plate through several printings (called states) before he was satisfied with the result. Individual impressions can even differ markedly depending on the way in which the ink is applied. These qualities make the appreciation of Rembrandt's prints a rich and complex experience, and "Strokes of Genius" lays out a series of challenges for visitors by exhibiting multiple states and differently printed impressions of the same image that vary in quality from good to excellent. The goal is to entice viewers to ask questions and look closely, preferably with a magnifying glass.

The gold standard for print collectors is *Christ Crucified between the Two Thieves (The Three Crosses)*, opposite, which was produced in the 1650s, when Rembrandt had reached the peak of his printmaking skills. The National Gallery is showing four excellent impressions of different states. In this rare instance, Rembrandt worked primarily in drypoint, scratching his design directly into the bare metal plate. Despite the difficulty of this technique, he burnished out parts of the composition and made radical changes. In the crowd of figures surrounding Golgotha, for instance, individual characters are reimagined. Straight, sharp strokes are added to suggest rain or darkness descending over the scene. As tense as wire, these scored lines convey not only a gloomy atmosphere but also the anxiety and grief of the event.

For Robison, a scholar of theology as well as art, this is Rembrandt's most important print: a profound meditation on the central mystery of the Christian faith. It demonstrates, Robison says, that Rembrandt "strove to interpret, not just describe [his biblical subject matter], with an almost mystical feeling for the power of light." But it is also a testament to Rembrandt's inimitable artistry. *—S.D.*

Quick, spare strokes and shading, typical of the artist's style, define the elderly figure in Rembrandt's 1630 red-chalk drawing *Seated Old Man* (left).

ROSENWALD COLLECTION, NATIONAL GALLERY OF ART, WASHINGTON, DC; P. 77, CLOCKWISE FROM TOP LEFT: ROSENWALD COLLECTION, NATIONAL GALLERY OF ART, WASHINGTON, DC; KUPFERSTICHKABINETT, STAATLICHE MUSEEN ZU BERLIN / ART RESOURCE, NY; ROSENWALD COLLECTION, NATIONAL GALLERY OF ART, WASHINGTON, DC

The inscription on Rembrandt's 1633 drawing *Portrait of Saskia* (above, not in the National Gallery show) reads: "This is drawn after my wife, when she was 21 years old, the third day of our betrothal, the 8th of June, 1633." *View over the Amstel from the Rampart* (below), c. 1646-50, depicts the scene along Amsterdam's Amstel River. The vertical strokes and central shaft of light in the 1653 drypoint *Christ Crucified between the Two Thieves (The Three Crosses)*, left, accentuate its wrenching drama.

{ CONTINUED FROM PAGE 75 }

demure yet confident gaze. Her left hand rests on a polished wood embrasure, while the elegant fan in her right hand drops in front of it. Is this a window frame, or the frame of the picture itself? This illusion, along with the direct pose, life-size scale and subtle play of light behind the figure, creates the sense that we are face to face with another living soul. Look closer, however, and the lifelike details of her frizzled hair, embroidered bodice, sparkling jewels and lace-trimmed collar dissolve into dashes and strokes of paint, with translucent glazes of color layered over thick impasto. This magical combination sets Rembrandt apart from the smoother, more polished technique favored by many of his contemporaries.

In 1634, when he was 28, Rembrandt married van Uylenburgh's 21-year-old cousin, Saskia. She, too, was a frequent model for the artist, who cast her in picturesque roles such as Flora, the goddess of spring. In an intimate silverpoint drawing of Saskia that Rembrandt made just days after their engagement, she wears a sun hat trimmed with flowers and smiles shyly (p. 77). During their eight years of marriage, the couple had four children, but only one, Titus, would survive infancy. In 1642, less than a year after Titus' birth, Saskia died at age 29, from illness or complications of childbirth. Her will stipulated that Rembrandt would benefit from her estate provided he didn't remarry. He had an affair with Geertje Dircx, a nurse brought in to care for the baby boy, then some years later rejected her for a younger woman, Hendrickje Stoffels, who had joined the household as a maid. Dircx sued him for breach of promise, provoking a long and bitter legal battle.

In 1654 Stoffels was called before the elders of her church and accused of "living in whoredom with the painter Rembrandt," but she stayed with him despite the scandal. Their daughter, Cornelia, was born later that year. Both Stoffels and Titus helped with Rembrandt's business (Titus would grow up to be a minor artist and his father's agent), and the boy was likely the model for several of the artist's evocative figure studies, including *Titus at His Desk*, painted in 1655. With a few swift strokes, Rembrandt captures the textures of cloth, hair, wood and paper, as well as the reverie of a schoolboy who would rather be anywhere but at his desk. Stoffels posed also: a sensitive portrait of her at about age 34 (p. 75) is at New York's Metropolitan Museum of Art.

For nearly 20 years, Rembrandt filled his spacious home on the Sint Anthonisbreestraat in Amsterdam with the bustle of students at work, clients coming to call and paintings and prints for sale. He also amassed a collection of objects that included not only works of art but Amazonian parrot feathers, Venetian glassware, African lion skins and other exotic treasures, some of which provided motifs for his

Rembrandt created *The Night Watch* (1642), his depiction of the officers and men of Amsterdam's Kloveniers Militia, to dramatize the civic guard's assigned role as protectors of the city, though in the 17th century they were not actually called upon to do any fighting. The artist uses light and color to emphasize the figures of the guard captain and lieutenant.

paintings. Never a good money manager, he failed to meet the mortgage payments and lost the house after he went bankrupt in 1656. The inventory of his art collection recorded at that time shows that he took an interest in the work of predecessors such as Dürer and Titian, as well as such Flemish contemporaries as Rubens and Van Dyck. The Rembrandt House (a private home until 1906, when it was purchased by the city of Amsterdam) opened as a museum in 1911.

In 1642 Rembrandt completed his most famous painting, the huge group portrait known as *The Night Watch*, which depicted a company of civic guardsmen marching out to defend their city. (The painting has been the star attraction at Amsterdam's Rijksmuseum since its installation in 1885.) Amsterdam in 1642 was, in fact, a peaceful and prosperous city, and the civic guard served more as a social club for ambitious citizens than a true military force. Rembrandt's imagined scene is a symbolic enactment of their proud readiness to serve. What makes this painting revolutionary is that Rembrandt took what could have been a boring row of figures and turned it into a lively action scene. One contemporary said that it made other group portraits look as flat as playing cards. Over the centuries, *The Night Watch* has been trimmed to fit a tight location, rolled up and stashed in a bunker to protect it from the Nazis, slashed with a bread knife (in 1975), sprayed with acid by a deranged museum visitor (in 1990) and interpreted on beer steins, on T-shirts and in the works of modern artists. But thanks to Rembrandt's bold invention and to the guardsmen's portrayal of the patriotic spirit on which the nation was founded, it has never lost its status as a Dutch national icon.

FOR SOME ADMIRERS of Dutch art, Rembrandt competes with van Gogh for the title of favorite son. But this year even Amsterdam's Van Gogh Museum hosted a blockbuster Rembrandt show— "Rembrandt-Caravaggio." The Italian master Caravaggio, who died in 1610 when Rembrandt was only a child, is best known for his treatment of biblical subjects with a rugged truth to nature, enhanced by dramatic light. His revolutionary approach sparked an international movement that reached Rembrandt (who never left Holland) through Dutch artists who traveled to Rome. The 2006 show compared the two masters' treatments of several related themes, but we don't have to look far to find evidence of Rembrandt's interest in Caravaggio's ideas, particularly his notion of biblical stories as emotional dramas enacted by people who still strike us as profoundly human.

A moving example from Rembrandt's later years is his 1656 *Jacob Blessing the Sons of Joseph* (above right). Here, we see the patriarch Jacob, ailing and nearly blind, as he reaches out to bless his two grandsons. Jacob extends his right hand to the younger brother, Ephraim, not to the elder, Menasseh. Rembrandt follows the text in Genesis as he depicts the boys' father, Joseph, gently trying to shift the patriarch's hand. But the old man is adamant, his action prophetic: he knows that the younger son is destined for greatness. Quietly watching is the boys' mother, Asenath. Her presence is not mentioned in the relevant passage, but she is named elsewhere in Genesis, as Rembrandt clearly knew. By including her in the picture, the artist emphasizes that this is, at heart, a family crisis. (He may, in fact, have painted this work for a Dutch family, each member standing in for a biblical character.) Despite the moment's fateful consequences, we sense, above all, the profound love and faith shared by three generations, enclosed in an intimate circle of light. While the strong play of shadow owes something to Caravaggio, the thick, almost sculptural surface of the paint, applied with strokes that are broad and quick but still marvelously descriptive, is Rembrandt's alone—his most original contribution to the history of technique.

For many modern viewers, this is Rembrandt at his best, but in his own time, his rough paint surfaces, dramatic lighting and pensive, down-to-earth characters increasingly set him apart from prevailing trends. Toward the end of his life, a taste for ideal beauty was sweeping Europe, and Dutch connoisseurs were demanding elegant figures and settings, clear light and refined technique. For refusing to conform to this fashion, Rembrandt was labeled in 1681 by dramatist Andries Pels as "the first heretic in the history of art." To Pels and other proponents of classicism, Rembrandt's expressive handling of

PP. 78-79: RIJKSMUSEUM, AMSTERDAM / BRIDGEMAN ART LIBRARY; PP. 80-81: GEMAELDEGALERIE ALTE MEISTER, KASSEL / BRIDGEMAN ART LIBRARY

paint seemed sloppy and unfinished. Yet, according to 18th-century biographer Arnold Houbraken, Rembrandt maintained that "a work is finished when the master has achieved his intention in it." Another target for critics was his treatment of the nude. While classicists argued that artists should aspire to the cool perfection of Greek sculpture, Rembrandt assiduously recorded his subjects' wrinkles and garter marks, knobby knees and wispy hair. For this, he was accused of failing to master the rules of proportion and anatomy.

Rembrandt was no less the nonconformist in his dealings with clients. Most artists welcomed them in their studios, but Rembrandt was gruff. If a prospective buyer tried to look at a painting too closely, Houbraken writes, Rembrandt would shoo him away, warning that "the smell of the oil paint will make you sick." In a notarial document of 1654, a Portuguese merchant named Diego d'Andrada complained to Rembrandt that the portrait of a girl he had ordered looked nothing like her. He wanted the artist to change it or return his deposit. Rembrandt told the notary that he wouldn't touch the painting until D'Andrada paid the balance due. Then, he said, he would submit it to the directors of the painters' guild for their judgment and would make changes only if they agreed with the client. If D'Andrada still wasn't satisfied, Rembrandt would keep the painting and sell it at auction. There was no mention of returning the deposit. How the case was resolved is unknown, but Rembrandt's attitude was as risky as it was courageous. It surely cost him some business, but in the long run, his enduring impact owes much to his creative independence, a mark of the "modern" artist.

By the time he died at 63 in 1669, Rembrandt had sold paintings and prints to distinguished collectors throughout Europe, trained dozens of students, made and lost a fortune, and created some of the 17th century's most memorable works. While his bold, unconventional approach to both life and art has been admired by some viewers more than others, the fundamental authenticity of his response to the human condition remains unquestioned. In *Rembrandt's Eyes*, an eloquent study of the artist and his milieu, the cultural historian Simon Schama observes that for Rembrandt, "imperfections are the norm of humanity. Which is why he will always speak across the centuries to those for whom art might be something other than the quest for ideal forms."

In *Jacob Blessing the Sons of Joseph* (left), Rembrandt portrays the biblical story as an intimate family drama. The painting has an almost sculptural surface, applied with quick, broad strokes. *Aristotle with a Bust of Homer* (right) was painted for a Sicilian patron.

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WAGING PEACE

IN THE PHILIPPINES

With innovative tactics, U.S. forces make headway in the "war on terror"

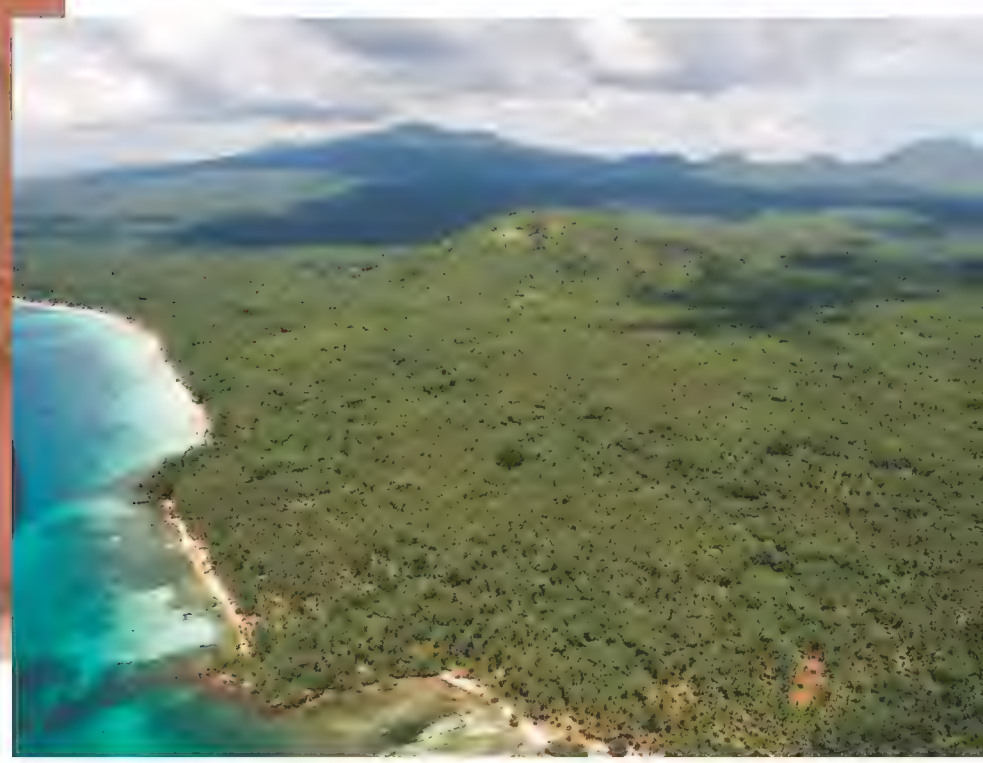
BY ELIZA GRISWOLD

PHOTOGRAPHS BY MEREDITH DAVENPORT

"THEY'LL SLIT YOUR THROAT ON JOLO," people told Col. Jim Linder, head of a U.S. military task force in the Philippines. He recalled the prediction as we buzzed toward Jolo Island in a helicopter. Linder, a 45-year-old South Carolina native who has the remnants of a Southern drawl, has led Special Forces operations in the Middle East, Central and South America, Eastern Europe and Africa for the past 20 years. His latest assignment is the remote 345-square-mile island at the southernmost edge of the vast Philippines archipelago. Jolo is a known haven for Al Qaeda-linked terrorist groups, including Abu Sayyaf, or "Bearer of the Sword," which has used the island for 15 years to train terrorists and to coordinate attacks.

Curiously, Jolo was also one of the first places where the United States ever battled Muslim insurgents. On March 7, 1906, less than a decade after the United States seized the Philippines in

"It's about how many people we get off the battlefield," Col. Linder (left, with villagers on Jolo Island, below) says of anti-terrorism efforts there.



the Spanish-American War, the people of Jolo—known as Moros, after the Spanish for Moors—revolted, among other reasons because they feared that the American effort to enroll their children in schools was part of a plan to convert them to Christianity. The Moros, armed with little more than swords, launched an insurgency against U.S. troops.

"They chased a bunch of Moros up that old volcano and killed them," Linder said to me, pointing out of the helicopter window. Below, the island rose into a series of steep volcanic ridges, each one glowing a lush green against the silvered surface of the Sulu Sea. In the Battle of the Clouds, as the confrontation on Jolo 100 years ago is called, U.S. forces killed 600 to 1,000 people. "It was commonly referred to as a massacre," Linder added quietly.

Today, a crucial but little-known battle in the expanding war on terror is under way on Jolo Island. Designed to "wage peace," as Linder says, it's an innovative, decidedly nonviolent approach by which U.S. military personnel—working with aid agencies, private groups and Philippine armed forces—are trying to curtail terrorist recruitment by building roads and providing other services in impoverished rural communities. The effort, known to experts as "the Philippines model," draws on a "victory" on the Philippine island of Basilan, where U.S. forces in 2002 ended the dominance of Abu Sayyaf without firing so much as a single shot. "It's not about how many people we shoot in the face," Linder said. "It's about how many people we get off the battlefield."

On Jolo, U.S. military engineers have dug wells and constructed roads that allow rural farmers for the first time to transport their produce to markets. This past June, the *Mercy*, a U.S. Navy hospital ship, visited Jolo and other islands to provide medical and dental care to 25,000 people, many of whom had never seen a doctor. American military medical and veterinary teams have held mobile clinics, where Special Forces, speaking native Tausug and Tagalog, gathered information from local residents as they consulted on agriculture and engineering projects. American soldiers are even distributing a comic book designed for ethnic Tausug teenage boys thought to be at risk of being recruited by Abu Sayyaf. The story, *Barbangsa: Blood of the Honorable*, tells of a fictional young sailor named Ameer who defeats pimply-faced terrorists threatening his Philippine homeland.

The southern Philippines has long served as a "war laboratory," says Marites Vitug, author of *Under the Crescent Moon* and a leading authority on armed rebellion in the region. "All sorts of armed groups dominate a populace long neglected by government," she says. "Local rulers compete for legitimacy with armed rebel groups, bandits, Muslim preachers, Catholic volunteers, loggers legal and illegal, the Marines, the Army. In this sense, Abu Sayyaf was ripe for growth. Modern history has proved that whenever the legitimacy of a state suffers and the economy goes down, other forces come to the fore as an alternative."

As Islamic revivalism swept through Asia and the rest of the Muslim world in the late 1980s, the angry young founder of Abu Sayyaf, Abdurajak Janjalani, began preaching violent jihad to Muslims on the island of Basilan. In 1991, Abu Sayyaf launched its first attack, against a Christian missionary ship, the M/V *Doulos*, a bombing that killed 6 people and injured 18. Abu Sayyaf reportedly went on to receive funding from Osama bin Laden through bin Laden's brother-in-law, Jamal Mohammad Khalifa, a Saudi businessman who ran Islamic charities on Mindanao. Both Abu Sayyaf and bin Laden's followers were linked to the failed plot to assassinate Pope John Paul II in Manila on January 13, 1995. In May 2001, Abu Sayyaf kidnapped an American missionary pilot, Martin Burnham, and his wife, Gracia. The couple spent more than a year in captivity before Martin was killed in a battle between the terrorists and Philippine forces, during which Gracia was rescued.

Over the years, Abu Sayyaf has received training and reportedly provided sanctuary to Al Qaeda and Al Qaeda-linked operatives, including Ramzi Youssef, who planned the 1993 World Trade Center bombing, and Khalid Sheikh Mohammed, who allegedly murdered the *Wall Street Journal* reporter Daniel Pearl in 2002. According to Vitug, the author, Abu Sayyaf has also been linked to the Philippines armed forces, through profitable illegal logging deals. Indeed, Abu Sayyaf has lately developed into a more conventional criminal syndicate, with jihad becoming secondary to making money through kidnapping.

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MAP: MIKE REAGAN

A rebel at 15 years old, Ibrahim (on Mindanao) fights for a faction of the Moro Islamic Liberation Front under Pakila Datu. The Filipino group has sought an Islamic state in the Philippines.

Tumult in the Philippines

December 1898: The U.S. Navy defeats the Spanish fleet in Manila Bay during the Spanish-American War and drafts a treaty that ensures U.S. control of the Philippines.

1900

February 1899: Filipino leaders reject U.S. sovereignty and launch a (failed) rebellion that lasts four years, costing tens of thousands of Filipino and thousands of U.S lives.

1925

November 1935: By U.S. decree, the Philippines becomes a self-governing commonwealth.

December 1941: Japanese occupation begins.

October 1944: Gen. Douglas "I Shall Return" MacArthur does just that.

1950

July 1946: The independent Republic of the Philippines is founded.

1986: After ruling for 20 years, strongman Ferdinand Marcos is forced into exile.

1975

1979: Jurisdiction over U.S. military bases passes to the Philippine government.

June 1991: Mount Pinatubo erupts, leaving 100,000 people homeless and prompting the evacuation and closing of U.S.-leased Clark Air Force Base.

1986: President Corazon Aquino restores democracy but fails to control rebels and the military; she's voted out in 1992.

January 2001: Gloria Macapagal Arroyo is sworn in as president after Joseph Estrada, charged with corruption, is deposed. She is reelected for a six-year term in 2004.

2000

June 1994: President Fidel Ramos grants amnesty to indigenous rebel groups. Two years later, his government signs a peace agreement with the Moro National Liberation Front.

May 2001: 20 people, including Americans Martin and Gracia Burnham, are abducted by the Islamist group Abu Sayyaf. After 376 days, Martin is killed in a battle between the terrorists and Philippine forces; Gracia is rescued.

February 2004: A bomb on a ferry causes a fire, killing 116 people. Abu Sayyaf claims responsibility.

International jihadists first used the lawless jungle islands of the southern Philippines as a way station between battlefields during the Soviet-Afghan War of the 1980s. At the time, the United States, which had operated military bases in the Philippines since 1947, was paying little attention to Islamist movements in the region. "The U.S. bases closed in 1992, and U.S. military assistance was reduced way down; the country kind of fell off our scope," a senior U.S. military official told me in Manila. "Well, it fell off our scope, but not the scope of some very bad people." He went on: "Ramzi Youssef, Khalid Sheikh Mohammed and Khalifah, bin Laden's brother-in-law, were all here setting up networks, financing, training and all grafting on to the growth of this pan-Islamist movement. They were developing tentacles and establishing themselves, shifting people back and forth from Afghanistan to the Philippines."

In February 2002, some 660 American soldiers landed in the Philippines to train the Philippine armed forces in joint military exercises known as *Balikatan* ("shoulder to shoulder" in Tagalog). Eight months later, terrorist bombings in Bali killed 202. "After the Bali bombings," the U.S. official told me, "we began to look very carefully at what do we need to begin doing to build up a very weak host nation that is struggling to come to grips with a very severe problem." At least two of the Bali bombers—members of Jemaah Islamiyah, an Indonesian militant group—have found sanctuary on Jolo and other southern Philippine islands.

Linder, who first arrived on Jolo in September 2005, says the counterinsurgency he's coordinating is not just a "hearts and minds" campaign to win affection for the United States. Instead, the goal is to cripple Abu Sayyaf and other terrorists by creating a stable civil society where none has existed. If U.S. forces can achieve the same success on Jolo as they did on Basilan, Linder says, "I think we'll have a new model for counterinsurgency to offer the world."

ALTHOUGH THE PHILIPPINES is Asia's only predominantly Christian country (90 percent of its 89 million people are Christians, most of them Roman Catholic), Islam arrived before Christianity—in the 14th century, along with Arab traders and missionaries. When Ferdinand Magellan claimed the Philippines for Spain in 1521, sultans already ruled the southern islands. For the next 377 years, the Moro people fended off domination by the Catholic conquistadors by fighting under the banner of Islam.

In 1898, when the United States defeated the Spanish fleet, the Philippines became a de facto American colony. Filipinos initially welcomed the Americans, but soon understood that America wasn't offering independence, and took up arms from 1899 to 1903. After the Americans killed tens of thousands of Filipinos, the nation came fully under U.S. control. Despite calm on most of the islands, an Islamic rebellion continued in the south. To quell it, Americans imported commanders from the Civil War and the wars against the American Indians.

BETTMANN / CORBIS (2); CORBIS; AFP / GETTY IMAGES; REUTERS / CORBIS; BULLIT MARQUEZ / ASSOCIATED PRESS; AARON FAVILA / ASSOCIATED PRESS; DAVID LONGSTREATH / ASSOCIATED PRESS; REUTERS/CORBIS

Once prosperous, the Philippines today is among the poorest nations in Asia, with 15 percent of the population living on less than $1 a day (Manila's Baseco neighborhood). "Those who don't own land have no voice," a human rights activist says.

Faced with Islamic insurgents called amoks (so named because they went berserk on the battlefield) and suicidal fighters called *juramentados* ("ones who have taken an oath"), American commanders were left to develop counterinsurgent tactics on their own. By 1913, U.S. troops had subdued the uprisings. Their success was due less to violent encounters like the Battle of the Clouds and more to community-building tactics, similar to those that U.S. forces are now employing on Jolo. "The most crucial tactical lesson of the Philippines war" at the turn of the 20th century, Robert Kaplan notes in his 2005 book, *Imperial Grunts*, "is that the smaller the unit, and the farther forward it is deployed among the indigenous population, the more it can accomplish."

Tensions rose after the U.S.-backed Philippine government, in 1956, sent thousands of northern Christians to the south, not only to give them farmland but also to counterbalance the Muslim majority. The southern Muslims found themselves kicked off their own land.

Several of the militant groups operating now in the southern Philippines have splintered from the Moro Islamic Liberation Front (MILF), homegrown insurgents who have fought the government since 1977. Over the years, the MILF has waged bombing campaigns as well as full-scale attacks against the Philippine armed forces in hopes of creating a separate Islamic state in the south. In 2001, the MILF signed a cease-fire with the central government, though sporadic fighting continues. The MILF claims some 12,000 members, and Philippine and U.S. officials say that rogue MILF leaders have sheltered Abu Sayyaf and Indonesia-based terrorists in exchange for, among other things, training in the use of explosives.

DAYS BEFORE I ARRIVED ON MINDANAO to meet with MILF members, the wife of a powerful MILF field commander was murdered. The woman, Bai Kausal, 38, was married to Pakila Datu, an enemy of the governor of Maguindanao province, Datu Andal Ampatuan Sr. ("Datu" is the honorific of a kind of hereditary Islamic lord.) Fighting between Pakila's forces and Governor Ampatuan's troops had previously driven 16,000 people from their homes. It was widely rumored that Pakila's wife, who was shot in her minivan, was killed by thugs working for the governor. The governor has not responded to the rumor. His father-in-law, a judge, issued a warrant for Pakila's arrest and placed a five-million-peso (about $100,000) bounty on his head. Pakila and his soldiers vanished.

I got a message that Pakila wanted to meet me; it seems he'd heard of my interest in his wife's murder. The next morning, following instructions, my guide, a photographer

Memorialized at his home on Mindanao, a farmer (center) and his fieldworker (left), both Christians, were killed this past June, reportedly by a splinter group of the Moro Islamic Liberation Front. It was trying to seize land believed to be rich in oil.

and I drove to a little grocery store on Mindanao. A heavy-set shopkeeper wearing a black *abaya* barked at us to move to the back of the store quickly and to stay out of sight. There, a large door in the storeroom opened unexpectedly onto a river, the Rio Grande de Mindanao. We climbed into a long wooden boat, and five or six veiled women climbed in after us—relatives of the murdered woman. After Kausal's death, her body had been taken by boat to her husband and buried. This would be the first time other relatives could visit her grave. The motor started up, and we pulled out into the open water beyond the red-and-white ferryboats. The riverbank shimmered green with tall grasses under the pewter sky.

We passed small villages: clusters of shacks on stilts. A few children bathed in the river. A bespectacled schoolteacher sitting beside me explained that no government troops would dare come into this area. This was MILF territory and everyone, farmers and fishermen alike, supported the rebel cause. To my surprise, she said she'd recently traveled to the United States as part of a delegation of Muslim teachers trying to convince U.S. officials that the MILF are not terrorists. "We want an Islamic state," she said. I thought it unlikely the United States would help anyone build an Islamic state, but I kept my mouth shut.

We chugged along. An hour passed, then most of another. We rounded a bend, and the bank was crowded with more than 100 rebels wearing camouflage uniforms, smiling and waving. As we grew closer, I could see that they carried assault rifles. A few carried rocket propelled grenade launchers slung over each shoulder. Some were children. As they helped us out of the boat, a man in a gray T-shirt emerged: Pakila Datu. He led us straight to his wife's grave, a simple stone set in a dirt patch at the edge of the compound. "I spoke to her on the phone 20 minutes before she was killed," he said. Behind us, women wept.

The rest of Pakila's riverside hide-out was made up of a farmhouse, a mosque and a basketball court. He led us into the house for a curried chicken lunch he'd cooked himself. As he served the chicken, he said something to his men, and they placed three brand-new American-made M-16s on the table. According to Pakila, he'd been buying American weaponry from the Philippine Army since 2002. The heavier weapons were taking a toll. "Both sides are stronger after Balikatan," he said, referring to the joint U.S.-Philippine military exercises. "Many more people are dying." U.S. intelligence officials told me later that such weapons sales were nothing new; the MILF buys most of its arms from Philippine government troops.

A young soldier leaned against the kitchen counter cradling an assault rifle. "How old are you?" I asked.

At his Mindanao hide-out, Pakila Datu (right) leads Moro Islamic Liberation Front rebels (below left) against the provincial governor, whom Pakila has accused of stealing his land. Pakila's wife, Bai Kausal (top left), was killed this past July.

"I'm 15 but was 14 when I joined. We have 8-year-olds who are training and carrying guns."

The room went silent.

Pakila said his battle with the governor had nothing to do with Islam. It was about control of land with untapped oil beneath it. This is today's MILF, I thought to myself: its leaders are more concerned with oil than jihad, and the Moro people are caught in the middle.

Pakila asked me to come outside into the glaring sun. The schoolteacher from the boat approached. "They are fighting because the government stole their land," the teacher said. I asked her to translate a question: Would everyone who'd lost their land to the government please raise their hands?

I waited a minute, but no hands went up. Maybe they didn't understand, I thought, but Pakila interrupted. "No," he said. "The land the government has taken is mine."

"All of it?" I asked.

He nodded yes, saying there were 1,000 hectares (about four square miles).

Suddenly I realized that these "rebels" were actually the private army of a feudal lord. Pakila was a very rich landowner. "So let me get this straight," I said. "If you weren't at war right now, would these men be farmers in your fields?"

Pakila Datu beamed. *Exactly*.

It struck me that the most pressing problem in today's Philippines isn't terrorism or even government corruption but poverty and a lack of social mobility. People at the bottom of society are trapped. That view has been expressed by Tina Monshipour Foster, executive director of the International Justice Network based in New York City. "Powerful ruling families stay in power because, after Spanish colonization, society is still essentially feudal. Those who don't own land have no voice, no rights, and virtually no representation." Since World War II, the Philippines has gone from being one of the richest countries in Asia to one of the poorest. About 15 percent of its people live on less than $1 a day, and the nation has one of the world's fastest-growing populations. People who don't own land have no way to feed their families other than to work, as they have for generations, on property belonging to large landowners like Pakila Datu. That's how these "rebels," and others like them, have ended up on the battlefield, fighting not for their own rights but for those of the big men they serve.

Before I left his camp, Pakila took me aside and said he wanted to start prospecting for oil. He wondered if I knew any American oilmen who might pay for the use of his land.

FILIPINO ATTITUDES about America vary. Alfred McCoy, a University of Wisconsin historian and an authority on the

Philippines, notes that many in the Filipino middle and upper classes regard America as an oppressive colonialist power that they successfully cast off, much as we see the British. But many working-class Filipinos believe in the American dream, and hope to move to the United States to work. (There are about 2.5 million Filipinos in the United States.) And many Filipinos still claim abiding allegiance to the United States because of America's role in liberating the islands in World War II. "The Philippine conception of America runs from idealization to demonization," McCoy says. "In the Philippines, we have a burdened historical relationship unlike any other country involved in the war on terror. On the one hand, we know them and they know us, so we can operate there. On the other, that relationship comes with baggage." Still, I found no overt anti-Americanism in the north or south of the country. Likewise, there is also very little support for the so-called terrorists, who are seen as criminals first and foremost, not defenders of Islam.

There are, of course, critics of the U.S. military presence in the Philippines. Some argue that the war on terror has provided Philippine president Gloria Macapagal Arroyo—a conservative member of the political elite, who was first elected in 2001—a blank check to destroy political opponents. "Arroyo is using a tool of the [Ferdinand] Marcos regime, extrajudicial execution," says McCoy. "She has run one of the most brutal state assassination campaigns—not on the terrorists, but on the remains of Socialist parties and activists." Earlier this year, Arroyo declared "all-out war" against leftist groups. Amnesty International has decried the government crackdown, saying it has led to more than 700 extrajudicial killings by paramilitary death squads since 2003. "President Arroyo is using the war on terror as a license to kill," says Monshipour Foster, the New York-based justice activist.

One target of the government-backed death squads, human rights advocates say, is the leftist political party Bayan Muna (People First), 93 of whose members have been killed. The party is headed by Congressman Satur C. Ocampo. Earlier this year, President Arroyo declared a state of emergency and issued a warrant to arrest Ocampo and five other House of Representatives members for alleged ties to Communists. To escape arrest, Ocampo lived in the House for 71 days until a judge threw out the case. "It was a ridiculous claim," he told me. Ocampo, an outspoken opponent of U.S. presence on Philippine soil, is sharply critical of what he perceives as American neocolonialism couched in terms of security. "The United States can now maintain a military presence here at any time," he said. "We should learn from Afghanistan and Iraq that pursuing a military end to the war on terror in countries like the Philippines with a long history of anti-imperialism is not going to work."

For their part, U.S. officials have condemned the killings. "What they so gracefully here call extrajudicial killing, that's actually murder," the U.S. Ambassador to the Philippines Kristie Kenney told me. "It doesn't matter who's doing it. This has got to stop."

McCoy says the U.S. role in the Philippines is akin to its involvement in Pakistan, where the United States has supported a military dictator in order to apprehend a small number of terrorists, while the nation as a whole loses out on real democracy: "It's symptomatic of the contradictions that run throughout the war on terror. We see this in the Philippines more sharply than anywhere else."

THE PHILIPPINE EQUIVALENT of Guantánamo Bay is a high-security camp inside Taguig Prison in Manila. The camp, called New Vision, houses more than 1,000 inmates, including numerous members of Abu Sayyaf and other Islamist guerrilla groups. In 2005, during a riot here, Abu Sayyaf seized a guard's weapon and held 100 people hostage for 24 hours until government troops stormed the building and shot 17 Abu Sayyaf inmates.

Visiting the prison isn't easy. After a score of phone calls and the intercession of a friendly politician, I was finally allowed inside the concertina wire. The warden led me to the Abu Sayyaf cellblock. From behind their orange-barred cells, three tiers of bearded men peered down at me in the visitor's gate. A Filipino journalist accompanying me gave me a nudge. "Go on," he said. I approached and called out to a young man: "I'd like to talk to Ahmed Santos." He shuffled off, and soon returned following a thin man in his mid-30s wearing rimless glasses and a T-shirt emblazoned with Malaysia's Twin Towers. Santos looked at me blankly. I launched into a lecture as to why he should talk to me, but he said yes before I had finished. I think he agreed because it was something to do.

According to Philippine and U.S. officials, Santos is the leader of a group that is the new face of international terror: militant Islamists who easily blend in with the local population. Santos is accused of being the head of the Rajah Solaiman Movement (RSM), which has allegedly forged alliances with Abu Sayyaf and other terrorist groups. The RSM consists of former Christians who have converted to Islam—or, as they say, "reverted," since much of the Philippines was Muslim before the conquistadors arrived. Santos, who was born Catholic and converted to Islam in 1993 while working in computers in Saudi Arabia, is believed to have been involved in a series of bombings in the Philippines, including the February 2004 attack on a ferry in Manila Harbor that killed 116 people. Philippine security forces arrested Santos in October 2005 after the United States put a $500,000 bounty on his head as part of the U.S. rewards for justice program, which offers cash to those who turn in suspected terrorists. The U.S. Embassy called his arrest "a significant victory in the fight against terrorism."

Because the criminal case against him was pending, he would not discuss details of the matter. He said he'd been an imam, or teacher of Islam, and that he advocated holy war, but he not only denied leading the RSM, he even denied the group's existence. "I don't consider this

Though concerned about terrorism, Amirah Ali Lidasan (in Cotabato City) of the Moro-Christian People's Alliance, opposes U.S. aid, saying it undercuts Philippine sovereignty.

Philippine and U.S. forces (Sergeant "Miguel" of Army Special Operations, right, with a Filipino soldier) secured a village on rebel-torn Jolo Island, enabling American engineers to rebuild a school, complete with solar panels to power Internet access.

a case about terrorism, but religion," Santos said, meaning that he'd been swept up in what he viewed as the West's global war against Islam. "Terrorism," he said, "is an excuse of the American government to justify attacks on Muslim countries."

Santos showed me marks on his arms that he said were cigarette burns left by Filipino interrogators, but he said neither the CIA nor the FBI had laid a hand on him during their interrogations. I had assumed that an accused terrorist would voice hostility to the U.S. counterterrorism campaign in the Philippines. But he seemed to support the U.S. presence, especially if it highlighted the Philippine government's failings. "I've heard about the *Mercy* ship, and as long as there is no hidden agenda, it's good for the people," he said, adding: "Since the government hasn't done anything for them, it's really a slap in the government's face."

AS THE HELICOPTER TOUCHED DOWN on Jolo in a grassy clearing, four Special Forces soldiers emerged from the jungle and squinted into the wind kicked up by the rotors. They led us to a school, where a small group of American civil engineers were installing solar panels to power its first Internet connection.

Colonel Linder said that, all in all, the Moro people have been welcoming. The greatest skepticism he faced was that of the local mayor, Butch Izquerdo. "Initially, Mayor Butch was real suspicious of us," Linder said. Izquerdo feared the Americans were after Yamashita's gold, a mythic treasure buried in the Philippines by a Japanese general at the end of World War II. Linder told the mayor, "We *are* here for treasure—it's in that 6- or 8-year-old child. They're the treasure of Jolo."

I had only a few minutes to speak on my own with villagers, including Izquerdo, who, out of the soldiers' earshot, muttered that he *still* thought they were after Yamashita's gold. The local head of the Red Cross whispered that she had consulted Muslim rebels and was surprised when they encouraged her to cooperate with the U.S. military—as long as she could get long-sleeved shirts for the rebels.

After we climbed into the helicopter and lifted off again, Linder directed my attention to a high, broken ridge—a reported Abu Sayyaf haven. The ridge dropped sharply into a small clearing where U.S. Special Forces troops were building another tin-roofed school. Children gathered in the green courtyard. From this vantage, life on Jolo appeared pretty tranquil. But it isn't. Abu Sayyaf insurgents weren't operating in the open, but that didn't mean they were gone. "We're very much in a war out here," Linder said. "We'll spill American blood on Jolo. It's only by luck, skill and the grace of God we haven't yet."

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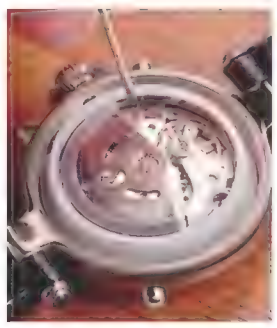

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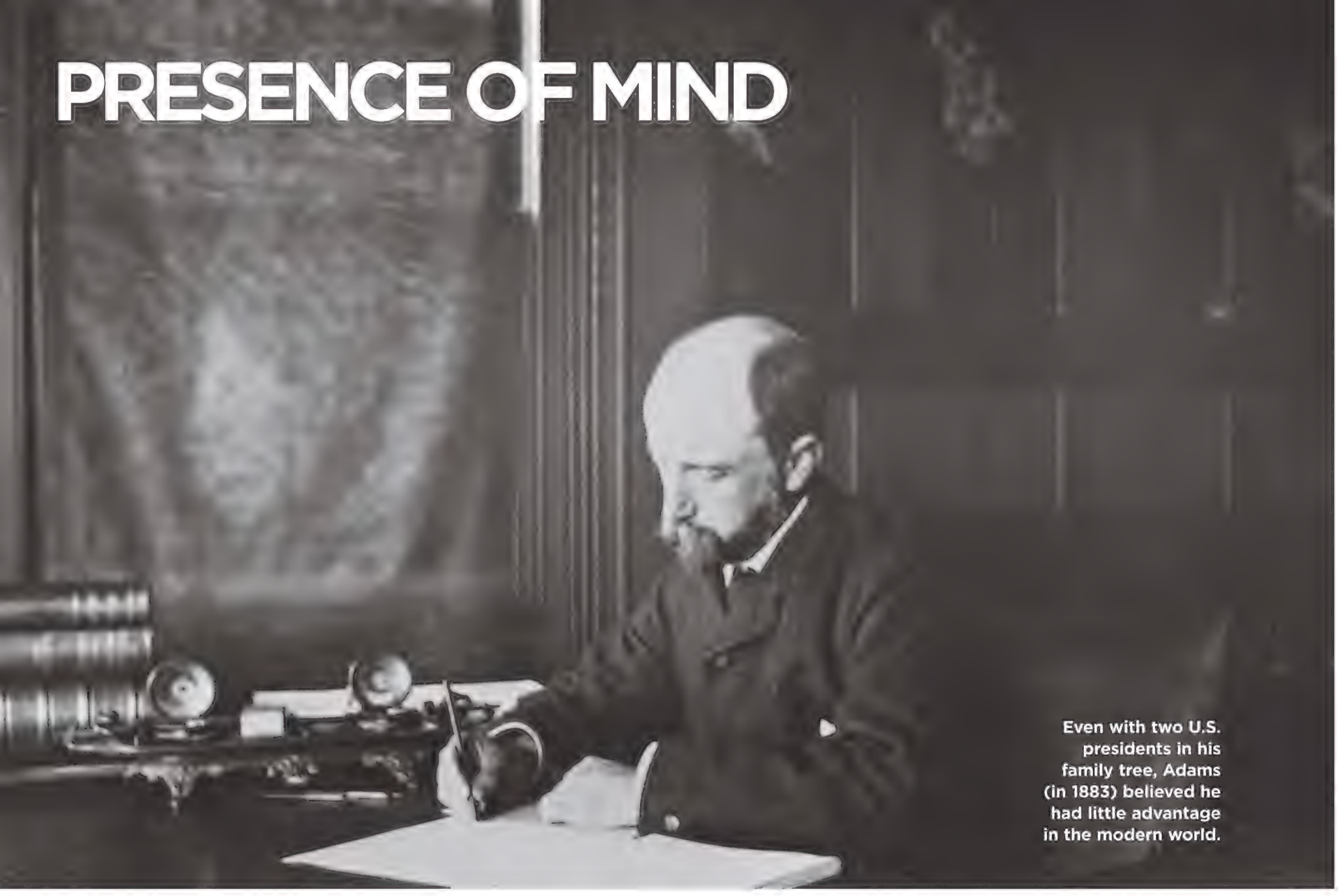

Even with two U.S. presidents in his family tree, Adams (in 1883) believed he had little advantage in the modern world.

Man of the Century

But 100 years after writing his classic memoir, the question about Henry Adams remains: Which century? **BY PETER HELLMAN**

UNDER A SILVER GRAY SKY, I stared up at a line of elegant 19th-century buildings on the south side of Avenue Foch, a three-minute walk from the Arc de Triomphe. A guide to literary sites in Paris was in my hands.

"Can I help you find something?" asked a passing Parisian.

Well, yes, I said. I was trying to identify the building where, a century ago, the Boston-born writer Henry Adams (1838-1918) had worked on a book.

Then in his mid-60s, Adams was straining to make sense of the world as the industrial age was remaking it; the resulting blend of autobiography, reportage, philosophy and science was published as *The Education of Henry Adams*. "I sit in a garret, while children pound pianos and sing scales below, all day, and their maids rattle boots and chairs over my head all night," he wrote to a friend. That letter, like hundreds of others in Adams' oddly vertical hand, was sent from 23 Avenue du Bois de Boulogne, Avenue Foch's former name.

"Why, I live at number 23," the Parisian said with sudden pride, pointing to a building just to our right. "Maybe I live where your writer did."

In midlife, Adams divided his time between Paris and a house on Lafayette Square in Washington, D.C. just north of the White House. Designed by H. H. Richardson, the great American architect of his era, that house, and the one he designed next door for the family of statesman John Hay, were demolished in 1927 to make way for a hotel that took the name Hay-Adams. But the handsome six-story building that had been Adams' Paris pad is still standing.

CORBIS

Education was once a familiar read on American college campuses, but lately I've found that the Social Security set is more likely to have read it than people still stoking their IRAs. That's a shame.

In his copious letters, Adams says almost nothing about the writing of the book, but he seems to have completed it in late 1906. Early the next year, he was circulating privately printed copies to friends who appeared in it, such as Henry James and Theodore Roosevelt, and asking for "assent, correction, or suggestion." Few had any to offer. Having prepared a version for posthumous release, he entrusted it to his fellow Boston blue blood Henry Cabot Lodge in 1916. Following Adams' death two years later at 80, *Education* was published commercially.

The book sold well; it was still generating about $4,000 in annual royalties when its copyright expired in 1993, according to Conrad Edick Wright, a historian at the Massachusetts Historical Society, former owner of the copyright. It won the Pulitzer Prize for biography in 1919, and topped a list by the Modern Library, a publisher of literature in affordable editions, of the 100 most important nonfiction books of the past century. Now Wright and Edward Chalfant, author of a three-volume biography of Adams, are preparing a centenary edition. And even as the information age sweeps the world, Adams' book remains a compelling self-portrait of a man trying to keep his feet as the ground shifts around him.

HENRY BROOKS ADAMS' great-grandfather, John Adams, was the second president of the United States; his grandfather, John Quincy Adams, was the sixth; his father, Charles Francis Adams, was a congressman and U.S. minister to Great Britain during the Civil War. *Education*, which Adams wrote in the third person, begins its chronological march with the author's privileged birth on Mount Vernon Street in Boston on February 16, 1838. But it also notes his feeling that his lineage conferred no head start "in the races of the coming century."

Adams sought education but resisted the classroom. One morning during a stay in Quincy, Massachusetts, with his paternal grandparents (who were addressed as "the President" and "the Madam"), Henry, then age 6 or 7, refused to go to school despite his mother's entreaties. At the top of the stairs, Adams writes, the door to the President's library suddenly opened "and the old man slowly came down. Putting on his hat, he took the boy's hand without a word, and walked with him, paralysed by awe, up the road to the town."

Henry assumed that "an old gentleman close on eighty would never trouble himself to walk near a mile on a hot summer morning over a shadeless road to take a boy to school, and that it would be strange if a lad imbued with the passion of freedom could not find a corner to dodge around, somewhere before reaching the school-door." But only after Henry was seated did "the President release his hand and depart."

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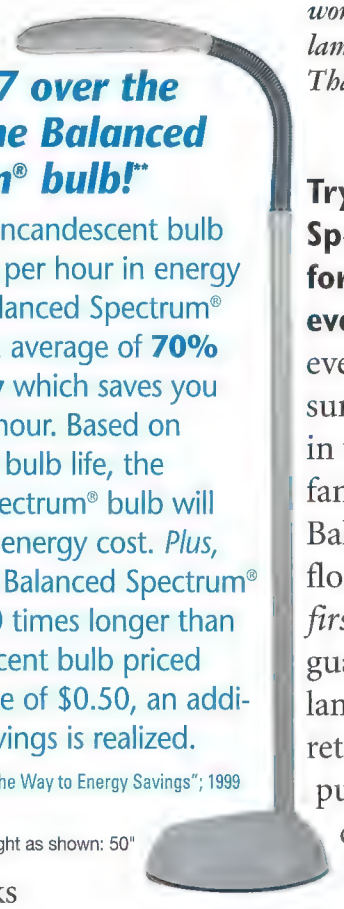

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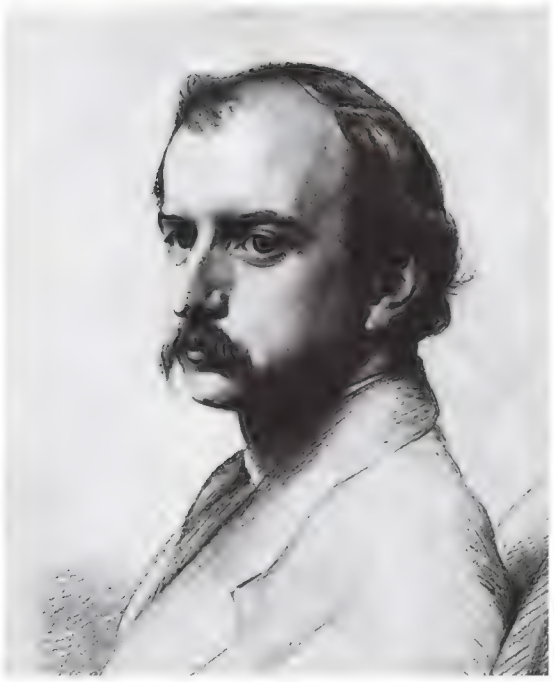
later, Adams realized that "the child must have recognized that the President, though a tool of tyranny, had done his disreputable work with a certain intelligence. He had shown no temper, no irritation, no personal feeling, and had made no display of force. Above all, he had held his tongue. . . . Had uttered no syllable of revolting cant about the duty of obedience and the wickedness of resistance to law. . . . For this forbearance, [the boy] felt instinctive respect. He admitted force as a form of right."

Like all Adams males, Henry was educated at Harvard. His class of 1858 included "Roony" Lee, son of Robert E., then a colonel in the 2nd U.S. Cavalry; Adams notes that within a few years fellow students from North and South would kill "each other by scores in the act of testing their college conclusions."

He spent the war years in England, serving as private secretary to his father. Adams' account of that man's effort to keep the British from recognizing and aiding the Confederacy crackles with tension, in contrast to the young man's account of his "dilettantism" in London society. "The English mind was like the London drawing-room," he writes, "a comfortable and easy spot, filled with bits and fragments of incoherent furnitures, which were never meant to go together, and could be arranged in any relation without making a whole." (As for the American mind, or at least as Europeans viewed it, "It was a convention, superficial, narrow and ignorant," Adams writes, "a mere cutting instrument, practical, economical, sharp and direct.")

He admits to toying with ideas, notably in a chapter titled "Darwinism." As he lay on an outcropping in rural England on a summer day in 1867, eight years after publication of *Origin of Species,* Adams declares himself willing to accept kinship with the fossilized fish embedded in the rocks around him as readily as he accepted his Boston forebears: "Out of his millions of ancestors, back to the Cambrian mollusks, every one had probably lived and died in the illusion of Truths which did not amuse him, and which



Adams (above, in 1868) went to Harvard with a son of Robert E. Lee, but spent the Civil War years as secretary to his father, the U.S. minister to Great Britain.

had never changed. Henry Adams was the first in an infinite series to discover and admit to himself that he really did not care whether truth was, or was not, true. He did not even care that it should be proved true, unless the process were new and amusing. He was a Darwinian for fun."

After London, Adams retooled as a Washington-based freelance journalist. Given his bloodline and the more informal times, Adams accessed the White House as casually as we would a Starbucks. He was a close reader of presidential character and, by inference, his own. Upon meeting Ulysses S. Grant in 1869 at age 31, for example, Adams intuited one of those men "whose energies were the greater, the less they wasted on thought. . . . Such men were forces of nature, energies of the prime . . . but they made short work of scholars. They had commanded thousands of such and saw no more in them than in others. The fact was certain; it crushed argument and intellect at once."

Like young people in every generation, Adams groped uncertainly toward a career, in his case as a journalist. "No young man had a larger acquaintance and relationship than Henry Adams, yet he knew no one who could help him," he writes. "He was for sale, in the open market. So were many of his friends. All the world knew it, and

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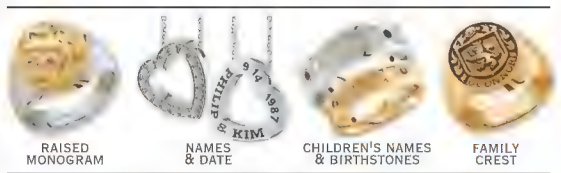

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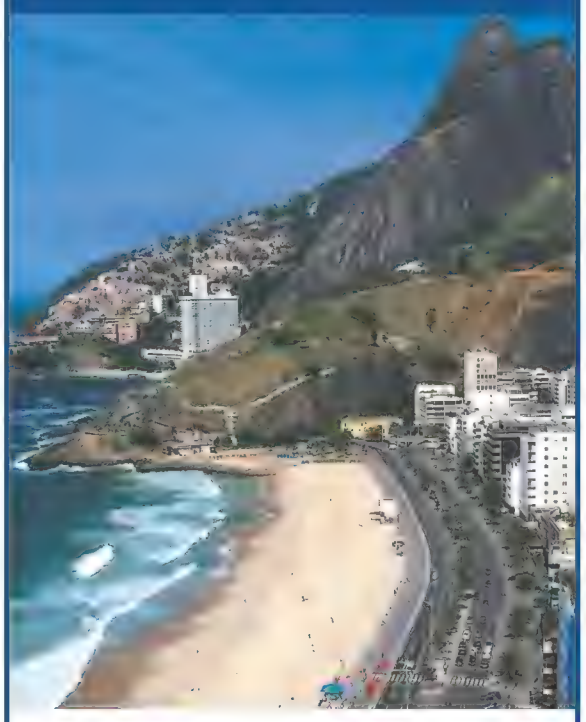

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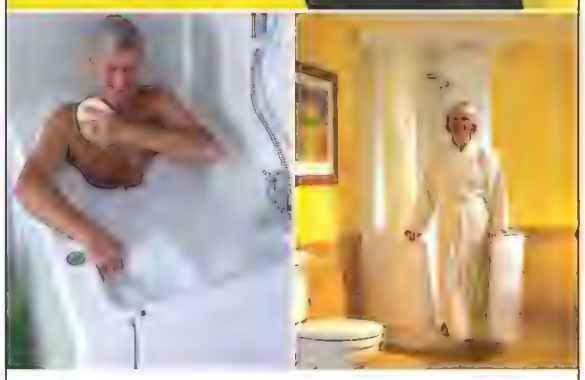

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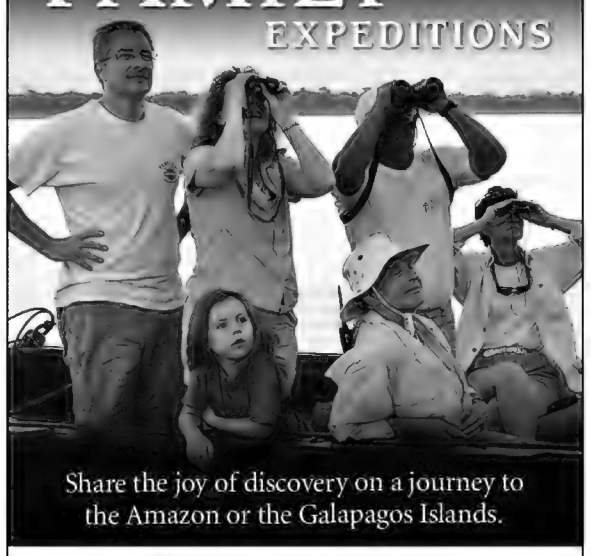

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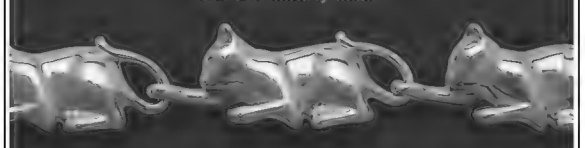

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knew too that they were cheap; to be bought at the price of a mechanic."

In 1870, Adams quit Washington to teach history at his alma mater, acquiescing to an unsolicited job offer from Harvard president Charles Eliot, though only after pleading by his family. In his self-deprecatory way, Adams claimed that "one could not take oneself quite seriously in such matters; it could not much affect the sum of solar energies whether one went on dancing with girls in Washington, or began talking to boys in Cambridge." Still, he built a reputation as a superb teacher who challenged students with interactive seminars in lieu of traditional rote methods. He taught for seven years and then, starting in 1879, spent a decade researching and writing the nine-volume *History of the United States During the Administrations of Thomas Jefferson and James Madison.* It was innovative in the reach of its archival research as well as a "prose masterpiece," according to Garry Wills in *Henry Adams and the Making of America.*

But as the 20th century approached, Adams worried that, by inclination and education, he was better equipped to be a mid-19th-century man. Among his concerns were the 1905 Russo-Japanese War over Manchuria, rioting against the czar in St. Petersburg and whether Germany would align itself with Russia or Western Europe.

Wondrous, but still worrisome, were such new sources of energy as radio waves and radium (though his narrative goes through 1905, he does not mention Einstein's publication that year of the theory of relativity). He was not religious, but technology made him devout. He pondered the "great hall of dynamos" at the Paris exhibition of 1900, where he felt the mighty machinery "as a moral force, much as the early Christians felt the Cross."

The earth itself, he writes, "seemed less impressive, in its old-fashioned, deliberate, annual or daily revolution, than this huge wheel, revolving within arms-length at some vertiginous speed and barely murmuring—scarcely humming an audible warning to stand a

To his wife, Clover, Adams marveled at his luck in finding "the only woman in the world who fits my cravings." Yet he never mentioned her in his *Education*.

hair's breadth further for respect of power—while it would not wake the baby lying against its frame. Before the end, one began to pray to it; inherited instinct taught the natural expression of man before silent and infinite force."

And yet despite the range of Adams' interests, his capacity for self-examination and his unblinking engagement with the world, there is a striking gap in his story, for reasons that he found too painful to discuss in *Education*.

IN 1872, Adams had married Marian Hooper, known as "Clover," who came from a wealthy Yankee family. She was a superb horsewoman, pioneering photographer and witty hostess, but a shadow fell over their honeymoon in Egypt when she suffered a bout of depression. In 1880, they moved from Boston to a rented house on H Street in Washington, two blocks from the White House. They rode horses in Rock Creek Park and developed a close friendship with John Hay and his wife, Clara, and with the geologist Clarence King, an apparent bachelor who secretly kept an African-American wife and family in New York. This group socialized regularly in the evenings and called themselves "the five of hearts."

Adams doted on his wife and fretted while she attended her dying father in

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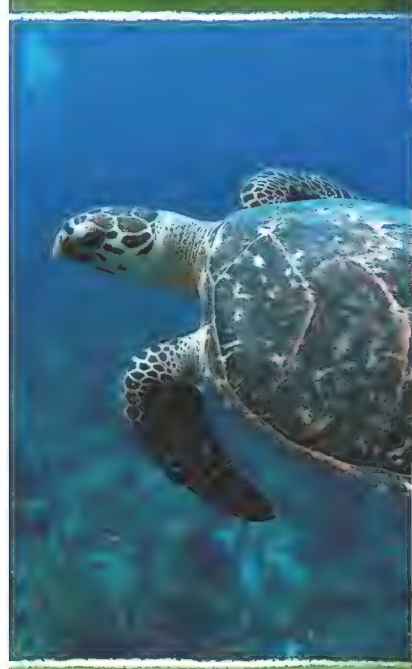

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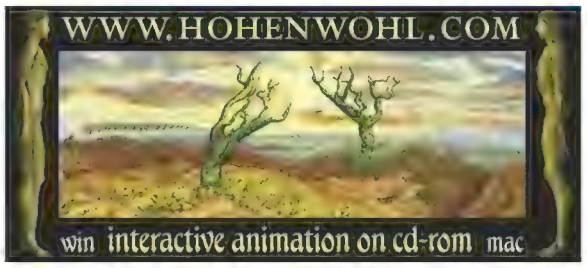

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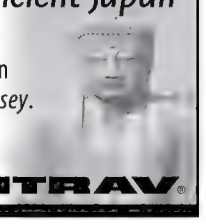
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Massachusetts in the spring of 1885. "How did I ever hit on the only woman in the world who fits my cravings and never sounds hollow anywhere?" he wrote to her. But after her father died, depression again overtook Clover. On a Sunday morning that December, as Henry set out to the dentist about a toothache, she went to her studio and swallowed a fatal dose of potassium cyanide. (Her aunt and sister also committed suicide and her brother attempted to.) Two days later, Adams replied to a condolence telegram from John Hay, "I shall come out all right from this—what shall I call it—Hell!"

Clover's suicide coincided with the completion of his Lafayette Square house. A few weeks after he buried her in Rock Creek Cemetery, Adams moved into it alone. Fortunately, the Hays and their four children would soon be next door. Henry, though childless, loved children. He created a "hat shop" under his desk for a favorite child, and the sign for it remained there until he died 30 years later.

Clover's name appears nowhere in *Education*, though there is a passing mention of Elizabeth Cameron, the beautiful, lively and much younger wife of an alcoholic Pennsylvania senator who had been a friend of Clover's as well as Henry's. As a widower, Adams was smitten by "Lizzie," but her interest in him was not romantic. That became painfully clear to Adams after he cut short an extended South Seas voyage (1890-91) with artist John La Farge to "race" via steamship to Paris, where Cameron had led him to believe she awaited him. Alas, she gave no satisfaction to her would-be lover when he at last presented himself. Protesting that he "was not old enough to be a tame cat" (he was then 53), Adams expressed his love, and his hurt, in a long letter to Cameron as she sailed back to America. "I, who would lie down and die rather than give you a day's pain, am going to pain you the more, the more I love," he wrote.

With the years, Adams and Cameron deepened their platonic relationship and faithfully corresponded.

Adams cut short a South Seas voyage to "race" to Paris to present himself to the already-married Elizabeth Cameron—who rejected him, but remained a friend.

Adams attended to her apartment in Paris while she traveled, and he kept up a doting friendship with her daughter, Martha. He let his guard down with Lizzie as with nobody else, as in a 1907 letter in which he wrote: "Behold me! I am busted and boiled and buttered. I am a biled owl. I am a cold buckwheat. I am a bummer-duffer idjut."

Adams planned to sail from New York to Europe on the first eastbound crossing of the *Titanic* on April 20, 1912. After the liner sank on the night of April 14-15, Adams wrote to Lizzie in Paris that he had "said it all, seven years ago, in my *Education*." And he had: "Every day nature violently revolted, causing so-called accidents with enormous destruction of property and life, while plainly laughing at man, who groaned and shrieked and shuddered."

Three days after writing that letter to Lizzie, the 74-year-old Adams suffered a stroke. His family, disapproving of his bond to the still-married Cameron, tried to block her from visiting him as he convalesced. She came anyway. In 1913, Adams resumed his annual shuttle between Washington and Paris. He developed a new enthusiasm for medieval music. When the art historian Bernard Berenson sent him a magazine containing "Old Music," Adams wrote back: "Nearly at my last gasp, I got your songs yesterday morn-

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President & Publisher, Smithsonian Magazine Group

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Though childless, Adams (c. 1884) loved children; he made a "hat shop" under his desk for a favorite child. A sign for it stayed in place till he died 30 years later.

ing, and before noon we had sung them over and over. . . . I keep alive only in the 12th century, by cutting all connection with life since 1300."

During one summer in Paris, Adams had invited Lizzie, Berenson and the novelist Edith Wharton—the latter two of whom held each other in "low regard," according to Patricia O'Toole's *The Five of Hearts,* a portrait of Adams and his circle—to a dimly lit private room in a Paris restaurant. Wharton wore a black lace veil that hid her face. Berenson "was captivated by her artistic prejudices, which matched his own," writes O'Toole. Only when the lights came fully on did he recognize Wharton. Thus started a close friendship that lasted until Wharton's death, in 1937.

Adams died in his sleep on a spring night in 1918 at home in Washington. He was buried next to Clover in Rock Creek Cemetery, under the hooded figure of a mourner sculpted by Augustus Saint-Gaudens. (Gore Vidal, an Adams admirer, has instructed that he be buried close by.) No inscription, not even a name, is on the monument. Perhaps Adams foresaw that his lively essence would be better memorialized in the pages of his *Education.*

PETER HELLMAN, *a freelance writer in New York City, also writes a wine column.*

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Going Up?

Some brushes with fame are more uplifting than others **BY ERIC HANSON**

MY SISTER MADE HER first trip to New York City years before I did. She saw all the usual sights, but her favorite story was about riding in the same elevator with Brooke Shields' father. Even though he was only related to someone famous, my sister got as close to him as you are to this magazine, and the anecdote became a fixture in any family conversation about New York, or fame, or elevators. I would tell my story about seeing Jack Nicholson from the chairlift at Aspen, and she would top me with her legendary meet-up with the father of the actress and former child model in the Big Apple elevator.

I am from the Midwest. Does it show? People from the Midwest need to prove their existence by attaching themselves to famous people, perhaps even more than the rest of America. We travel to places that are more important than the places we are from. While we are there, we are the people waving in the background during TV interviews with Diane Sawyer or Matt Lauer. When I finally made my own trip to New York, I saw Swoosie Kurtz in the shoe department at Bloomingdale's. She was being not very pleasant to a saleswoman. It must be hard to be judged wherever you go by people like me. For all I know, the saleswoman was being unhelpful. But did I judge *her*? No, I judged Swoosie Kurtz. We ordinary people have the advantage of anonymity. When we behave badly in public, people usually blame a region or an ethnicity or a social class, not us personally.

All this was in my thoughts during the O. J. Simpson trial. It must be almost impossible to commit a perfect murder if you are a celebrity. Wherever you go, people recognize you immediately. They remember where they saw you and even what time it was. They note it in their diaries. This is true even if you are only Swoosie Kurtz or Robert Blake. Swoosie Kurtz obviously knows better than to commit murder, or to even hire it done. She must have thought long and hard about having the saleswoman at Bloomingdale's killed, but in the end her better judgment prevailed.

Among sophisticated people nothing is more tiresome than celebrity anecdotes, which is why, until this moment, I have shared my favorite story—the one where I am introduced to tennis legend Rod Laver by skiing legend Stein Eriksen at a posh Utah resort—with only a few dozen of my closest friends, usually at a dinner party right before my guests suddenly remember they're paying the baby sitter by the hour. Mr. Laver and I do not exchange Christmas cards, but it's been several years and who keeps that up anyway? Famous people are much more casual about such things.

Speaking of elevators, I once rode in an elevator with Garrison Keillor. This was when his radio program was on only a handful of stations in Minnesota, before he achieved worldwide fame as a novelist and serviceable baritone. He had just shaved his beard off, and I told him I liked him better with the beard on. It was a pretty bold thing to say. Actually, I was riding in the elevator to a meeting with him; I'd been asked to illustrate a book of poems he had written under the sobriquet of Margaret Haskins Durber. After our encounter in the elevator, I was perfectly at ease in the meeting, the way you always hope you will be when you are in the company of a famous person. I bantered a little and cracked jokes about beards. Garrison Keillor seemed amused, so I took it upon myself to offer him some advice. Ordinary people are often very wise. "Why are you publishing this little book of poems, anyway?" I asked breezily. "What you really ought to do is take some of your Lake Wobegon stories and make them into a novel."

The book of poetry was soon shelved. The novel, *Lake Wobegon Days*, spent more than a year on the *New York Times* bestseller list. Garrison and I have not spoken since.

ERIC HANSON